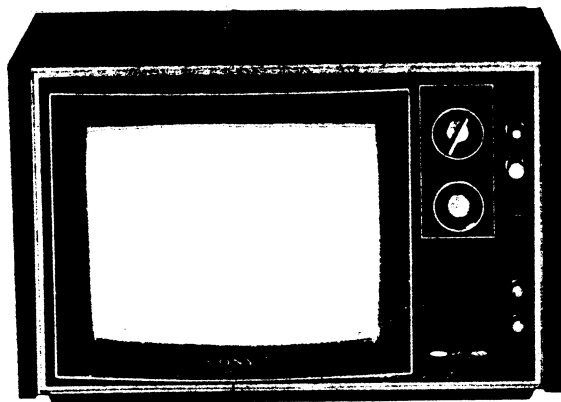


KV-1300E

Chassis No. Serial No.
 SCC-22A-A) Up to 25,000
 SCC-22A-B)
 SCC-22A-C 25,001 and later

This manual contains the
 Supplement No. 1.



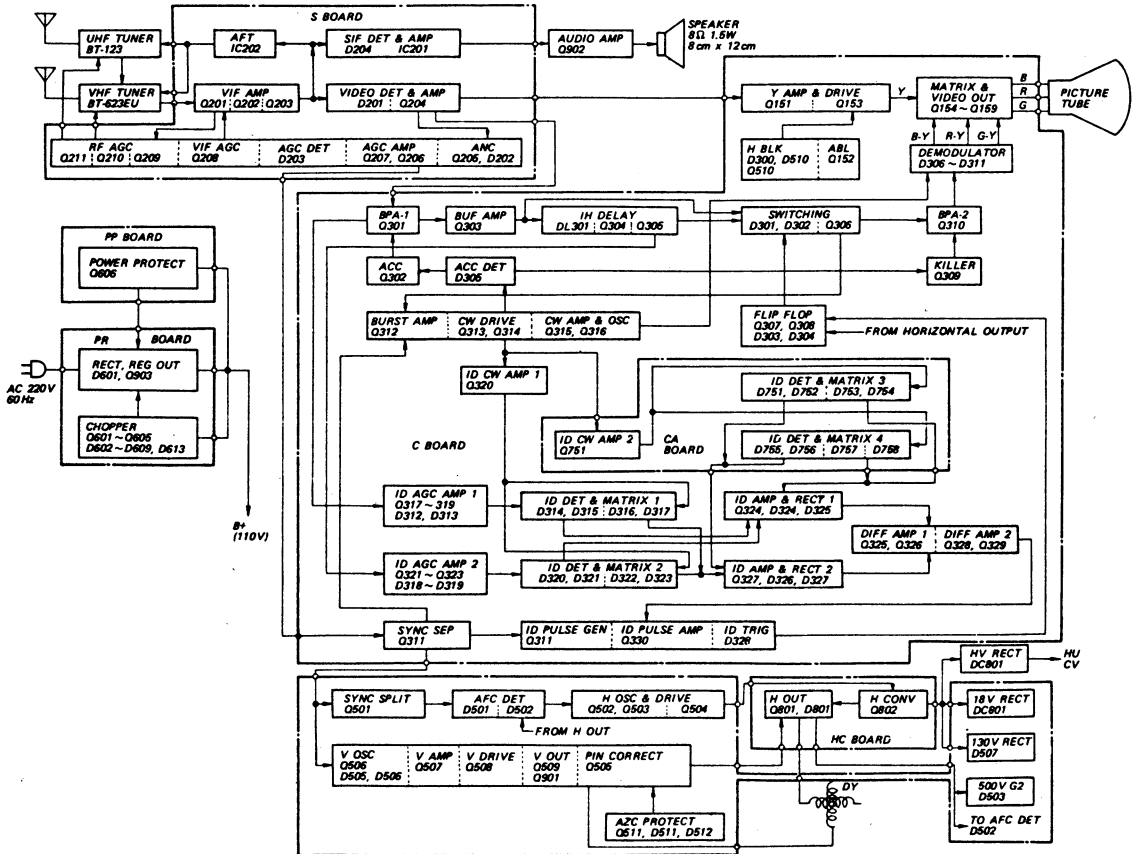
TRINITRON®
COLOUR TV

SPECIFICATIONS

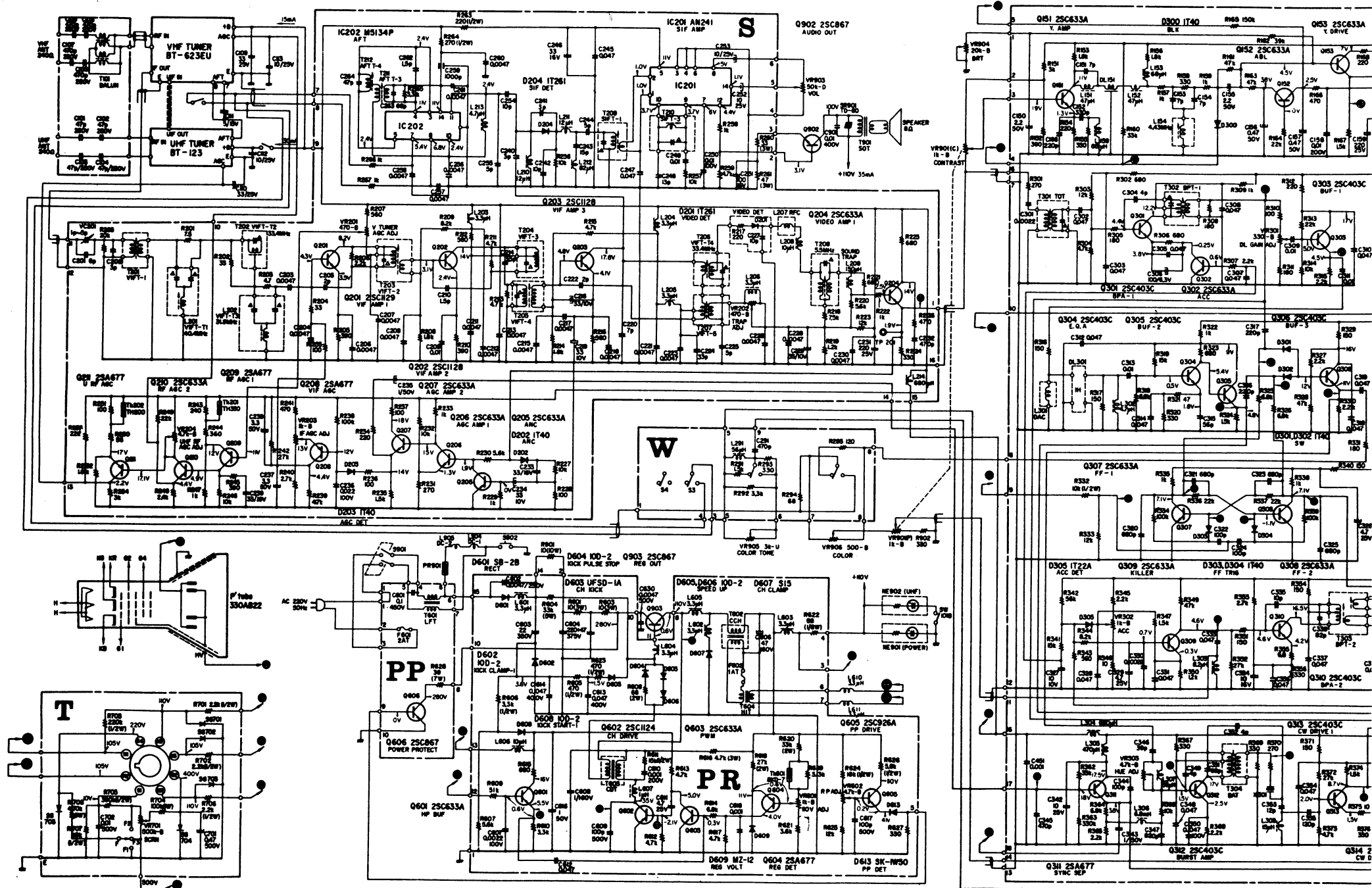
TV-signal standards:	CCIR system B and G	Power requirements:	AC 220V 50 Hz
Picture tube:	13" 90° deflection TRINITRON system (330 AB22)	Power consumption:	78 watts
Semiconductors:	79 transistors, 68 diodes, 2 ICs, 3 thermistors, 2 varistors and 1 posistor	Anode voltage:	20 kV at zero beam current
Channel coverage:	VHF; ch. E2 ~ E12 UHF; ch. E21 ~ E68	Automatic controls:	ACC (automatic color control) ACK (automatic color killer) ADG (automatic degaussing) ABL (automatic brightness limiter) ANC (automatic noise canceller) AFC (automatic frequency control) AFT (automatic fine tuning) AGC (automatic gain control) AVR (automatic voltage regulator) AZC (automatic zooming control)
Aerial system:	240-ohm aerial terminal type	Dimensions:	474 mm(W) x 318 mm(H) x 394 mm(D)
IF circuit:	3 stages with 1 double tuned and 3 single tuned elements	Weight:	14.1 kg
Intermediate frequency:	Picture i-f carrier; 38.9 MHz Sound i-f carrier; 33.4 MHz	Accessories:	Polishing cloth Instruction manual etc.
Video system:	Red, green and blue cathode drive system		
Sound system:	5.5 MHz intercarrier system Power output; 1.2 watts (at 10% harmonic distortion) Speaker; 8 x 12 cm, 8-ohm voice coil		
Convergence correction system:	Horizontal; electrostatic deflection system Vertical; magnetism correction system of magnet		

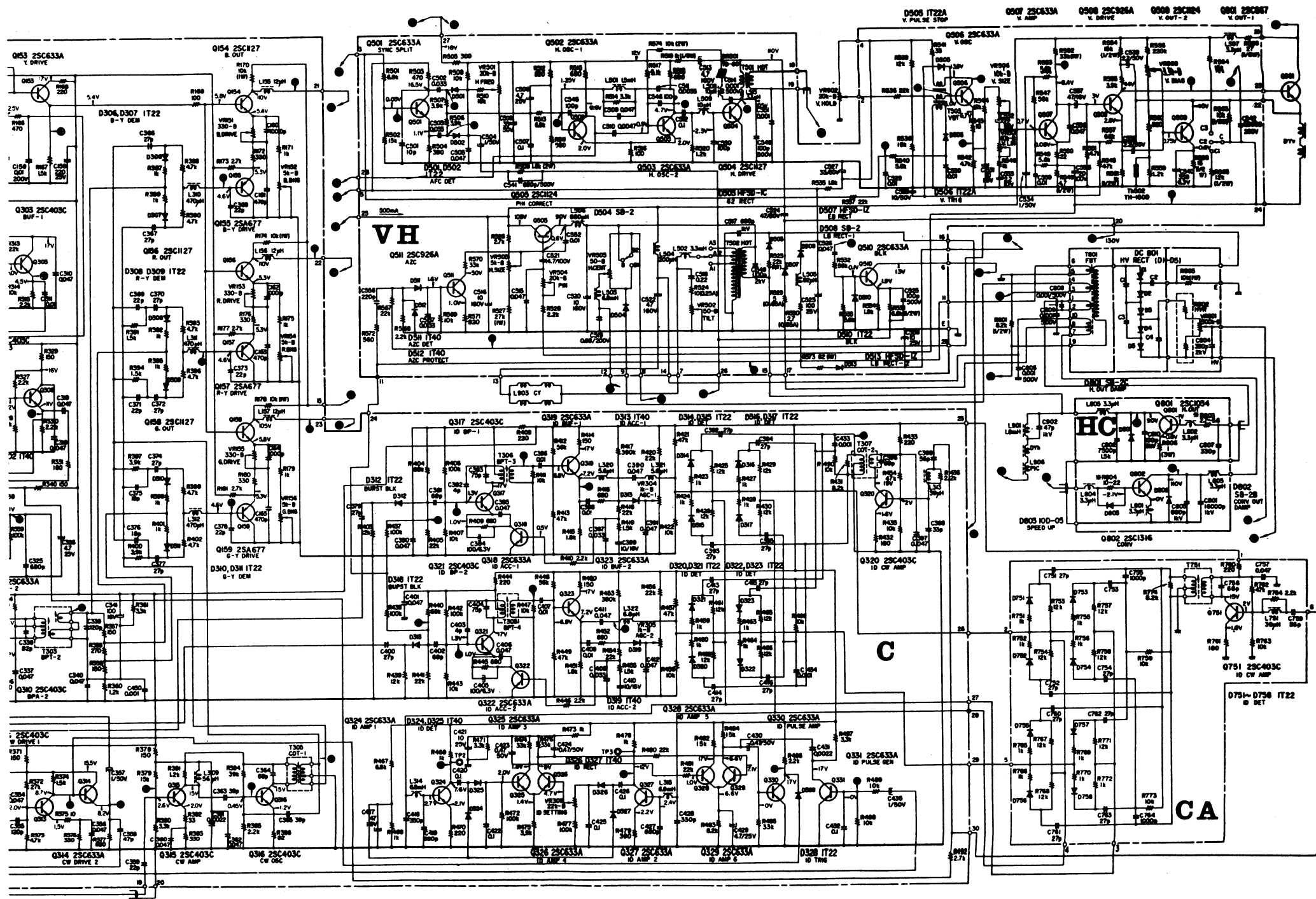
OUTLINE

BLOCK DIAGRAM

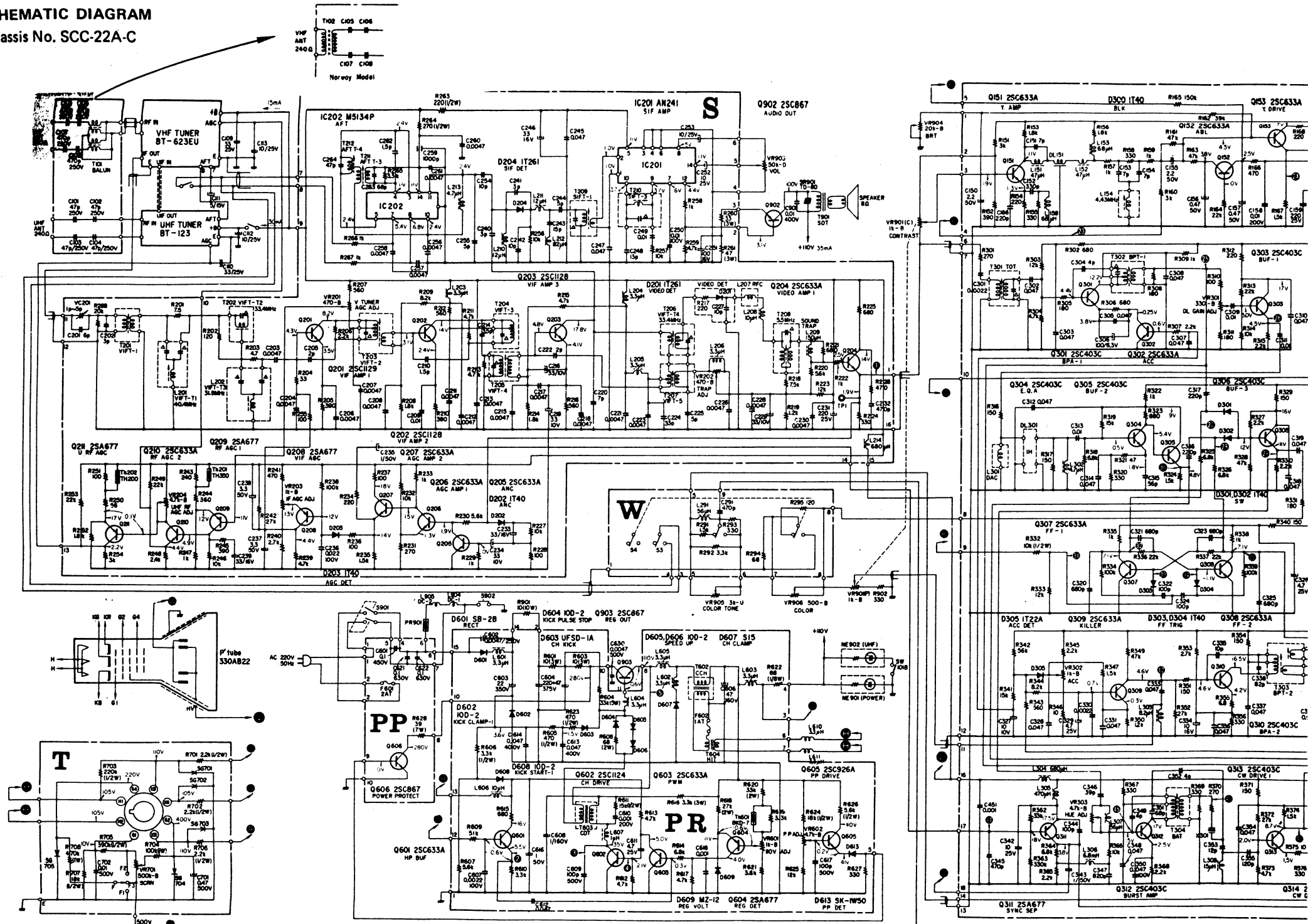


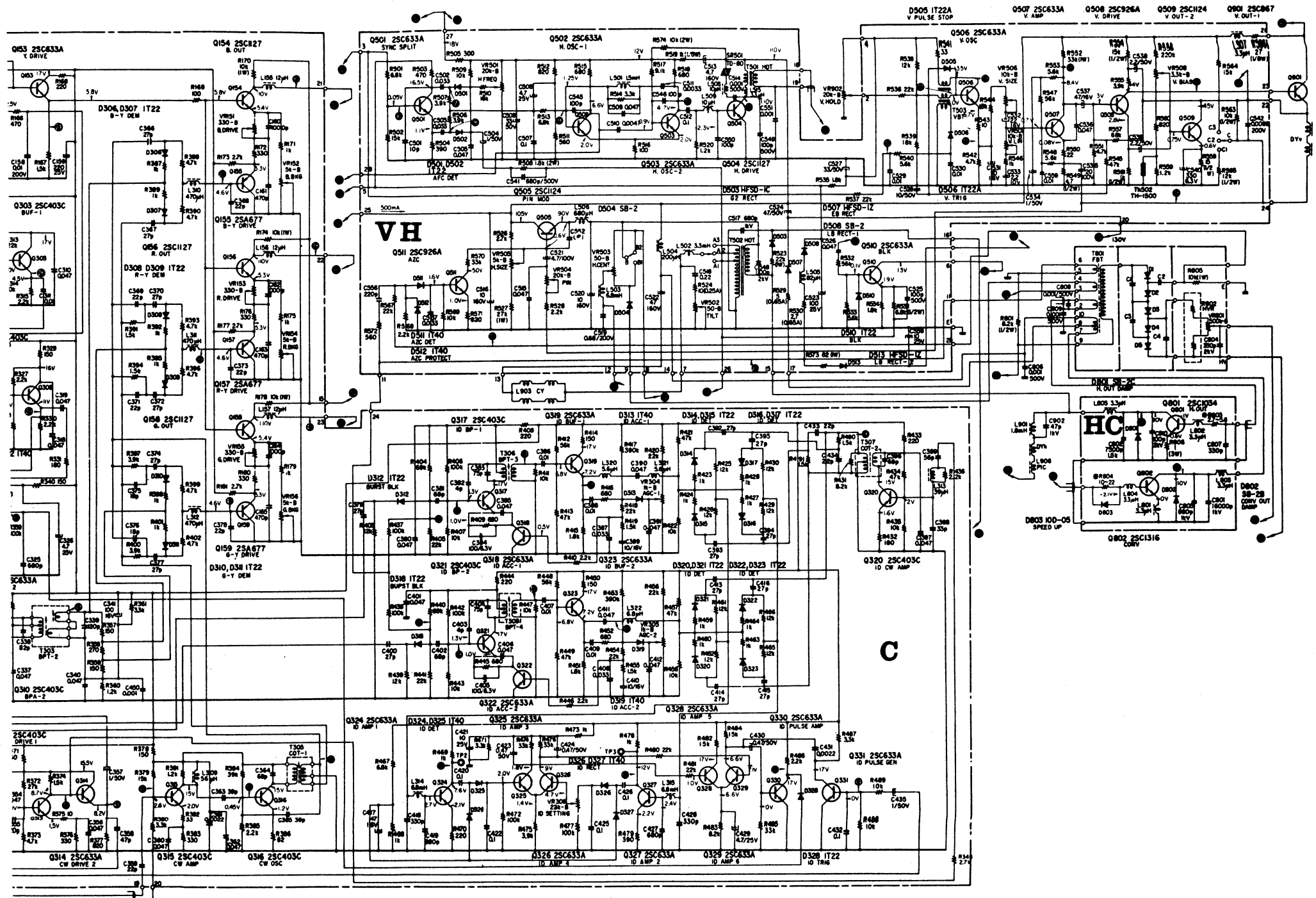
SCHEMATIC DIAGRAM Chassis No. SCC-22A-A, SCC-22A-B

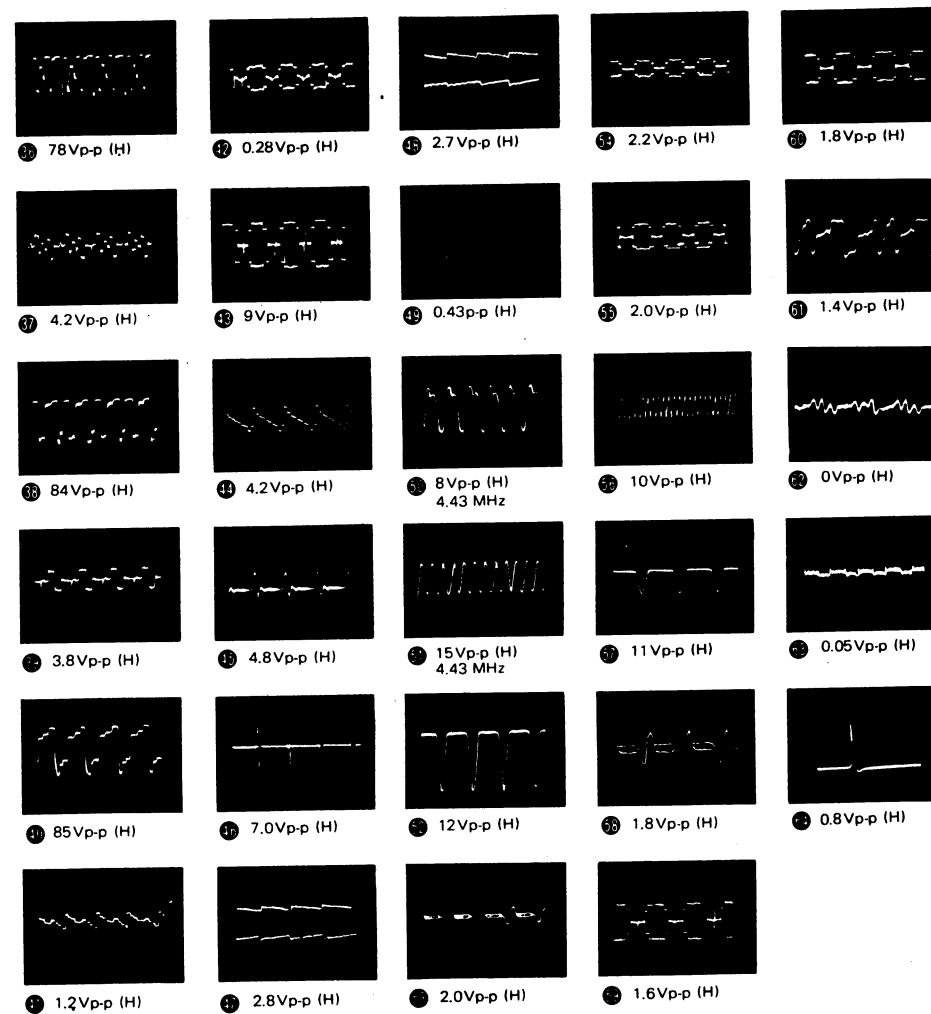
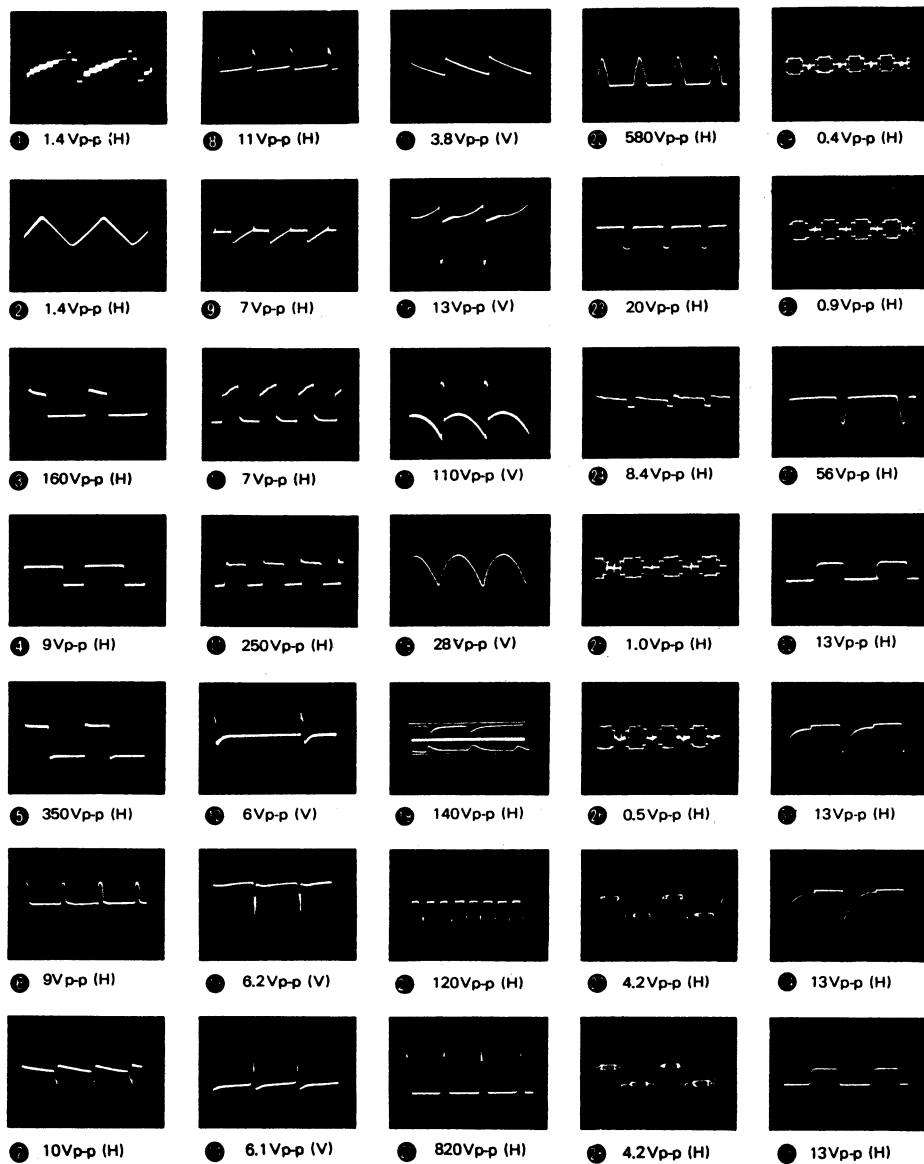




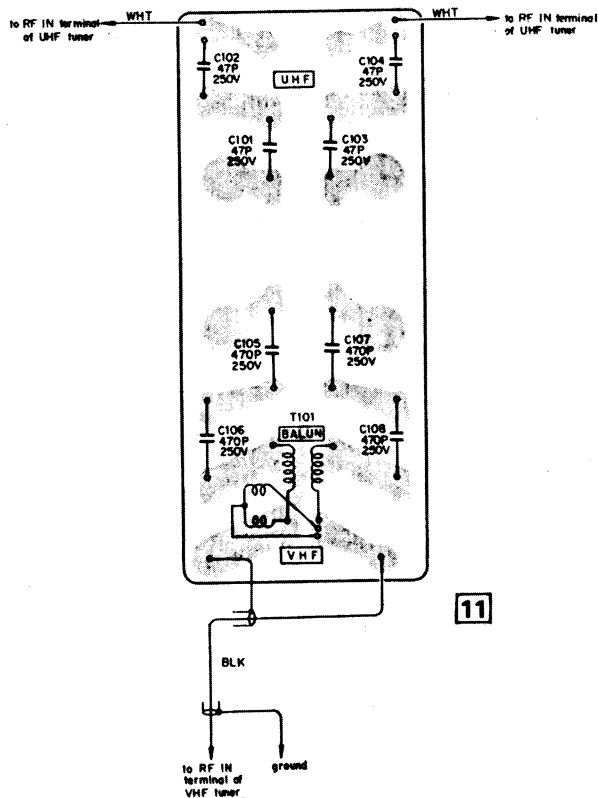
Chassis No. SCC-22A-C



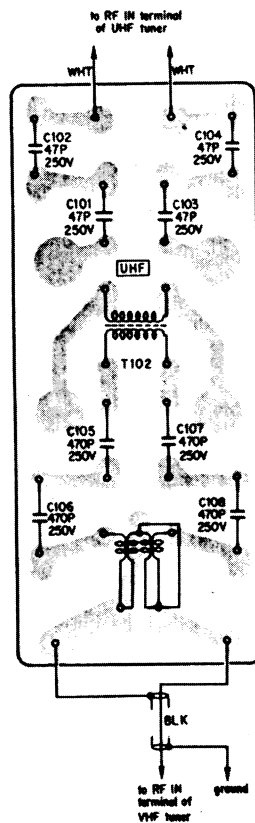




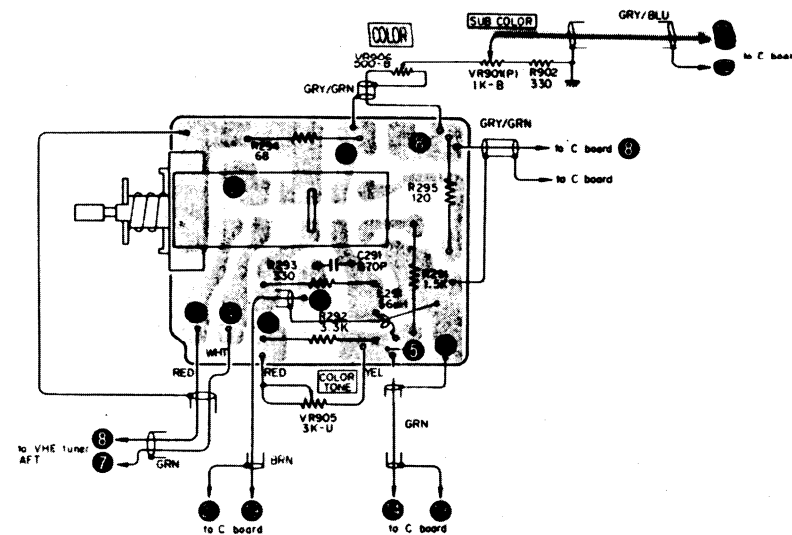
ANT CIRCUIT BOARD



— Norway model only —

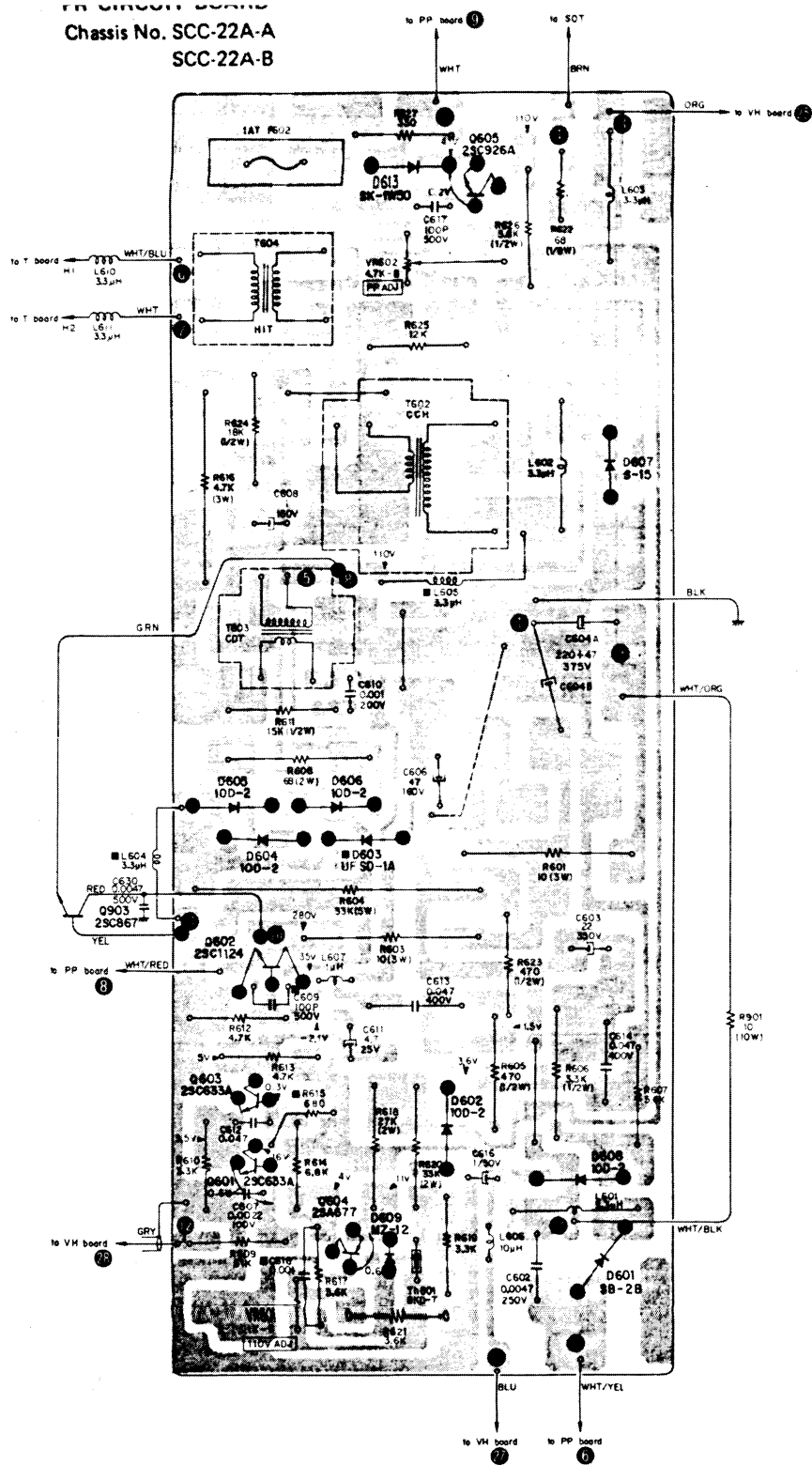


W CIRCUIT BOARD

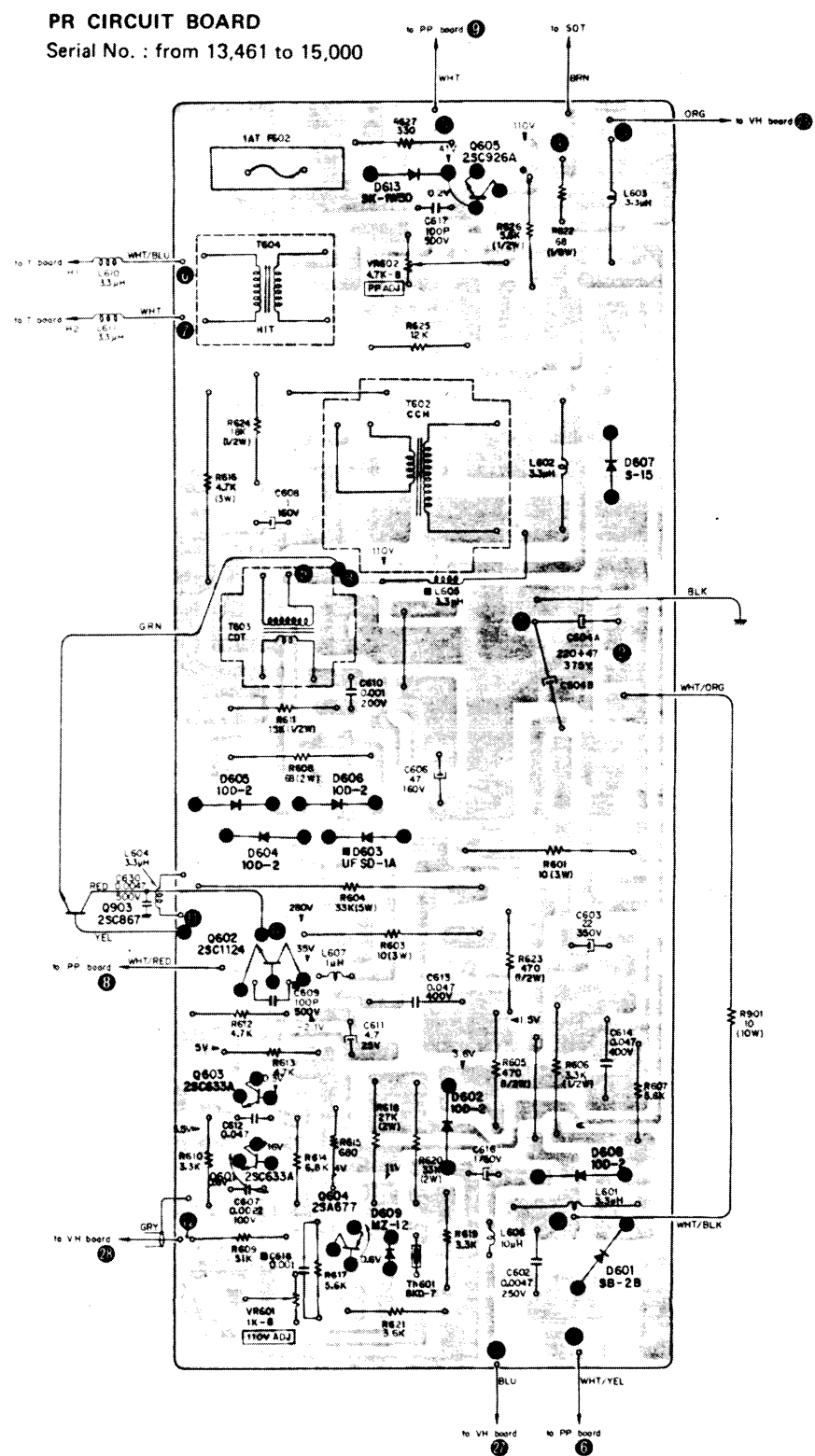


- Note:**
1. All capacitors are 50WV unless otherwise specified.
 2. All resistors are $\frac{1}{2}W$ unless otherwise specified.
 3. All resistance values are in ohms. $k = 1,000$.
 4. All capacitance values are in μF except as indicated with p, which means μF .
 5. Voltages measured from chassis to point indicated with a VOM (DC 20 k ohms/V) at color signal input.
 6. The parts marked * indicates a component whose value is selected to yield specified operating condition.
 7. The blue circled numbers (● ~ ☺) refer to waveform on page 51 and 52.

Chassis No. SCC-22A-A
SCC-22A-B



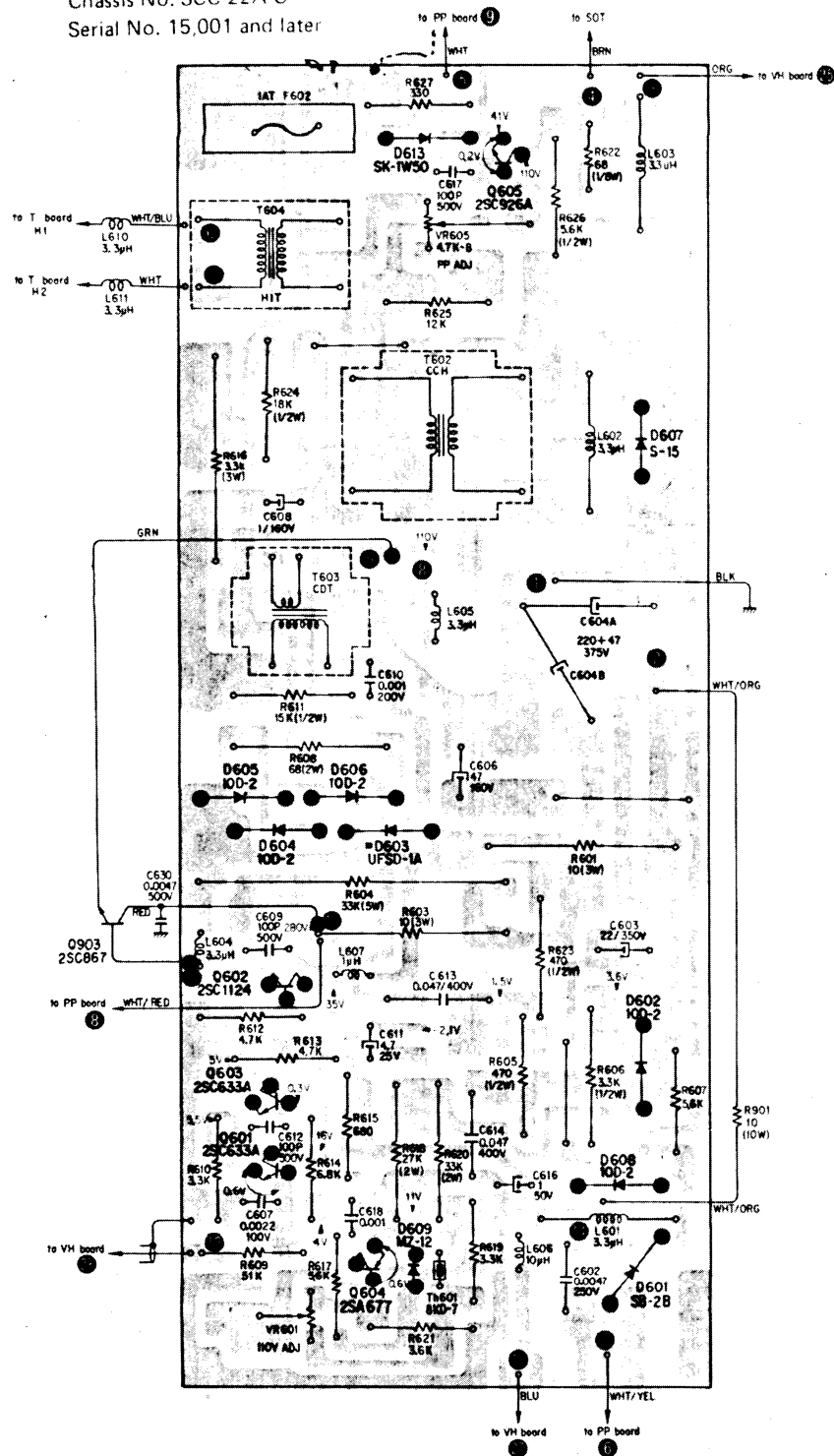
PR CIRCUIT BOARD
Serial No. : from 13,461 to 15,000



PR CIRCUIT BOARD

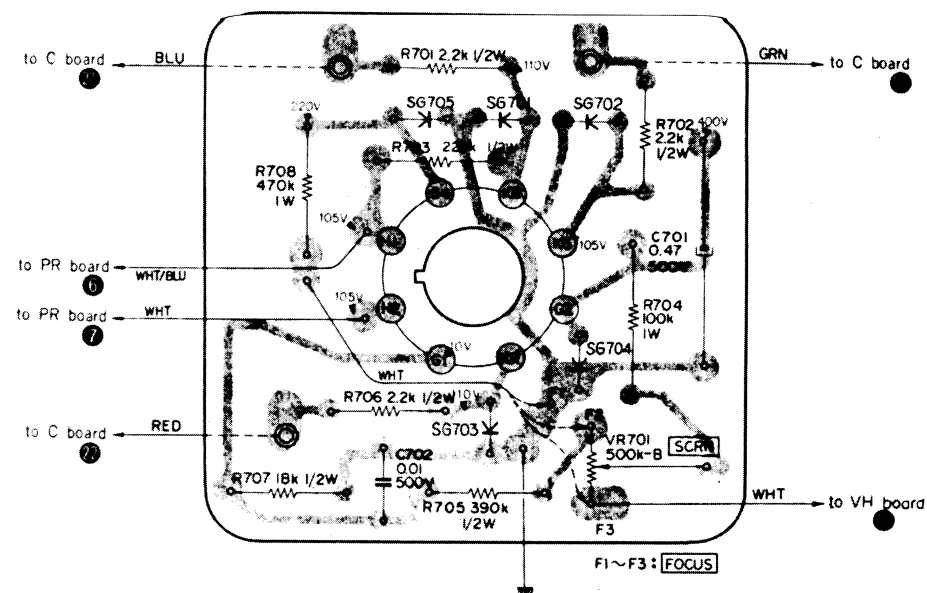
Chassis No. SCC 22A C

Serial No. 15,001 and later



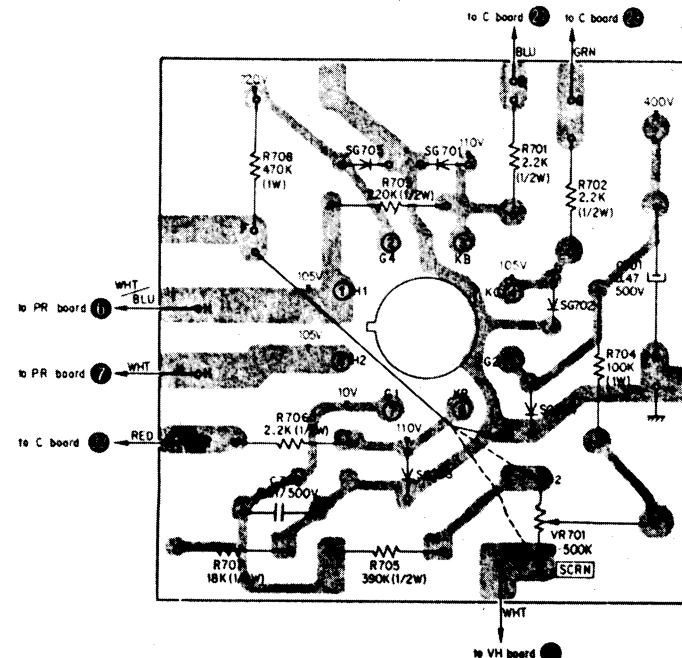
T CIRCUIT BOARD

Applicable serial No. up to 19,000



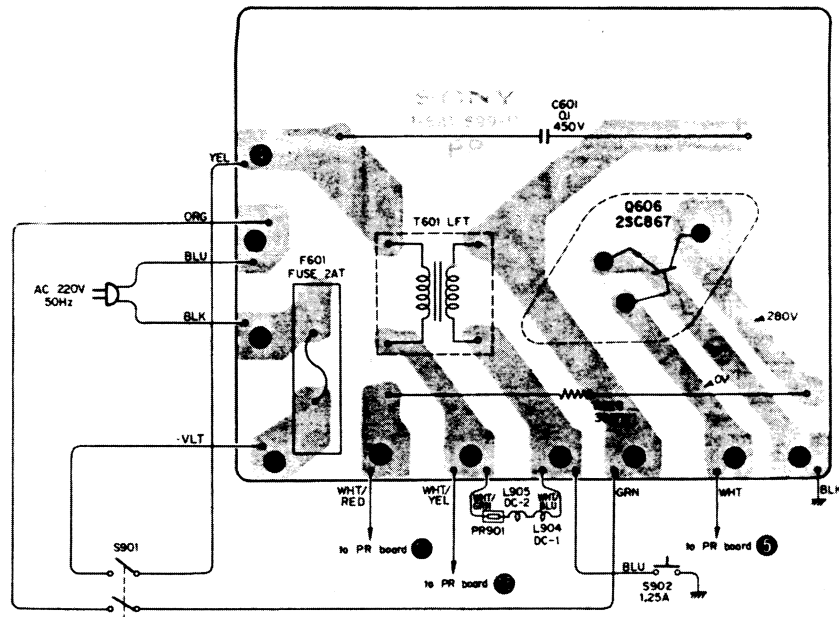
T CIRCUIT BOARD

Applicable serial No. 19,001 and later



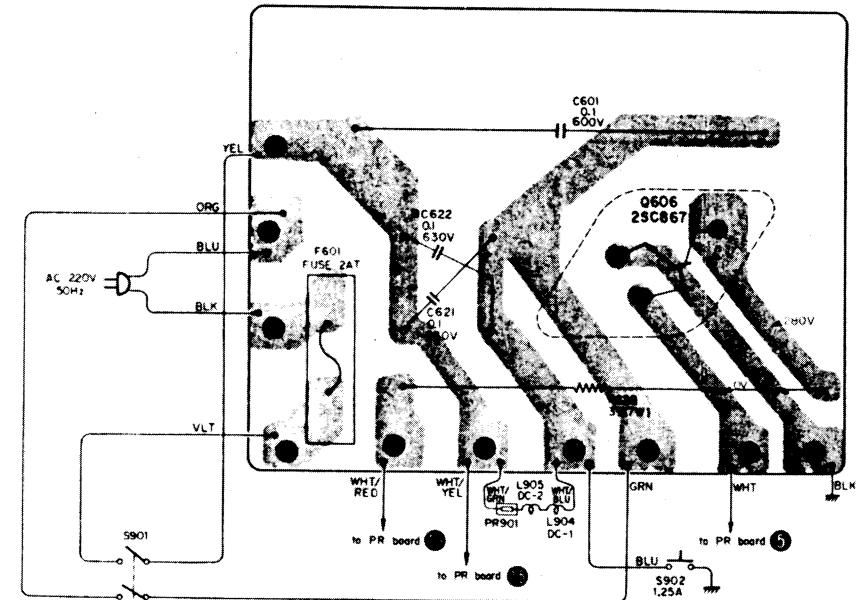
PP CIRCUIT BOARD

Serial No. Up to 14,000



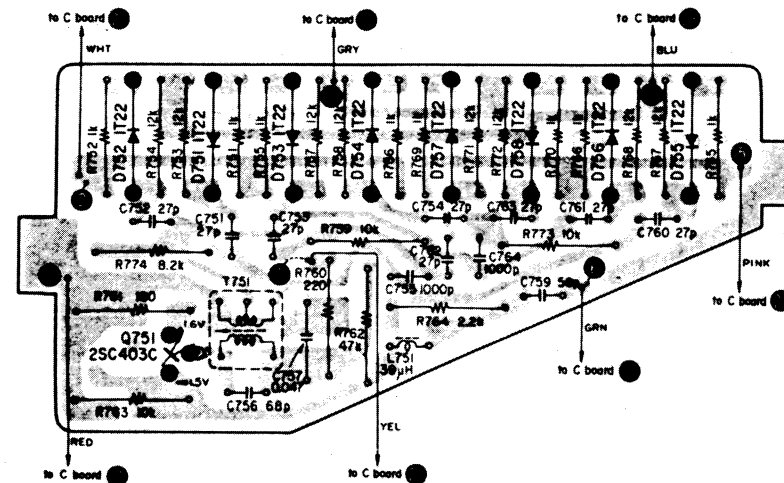
PP CIRCUIT BOARD

Serial No. : from 14,001 to 15,000



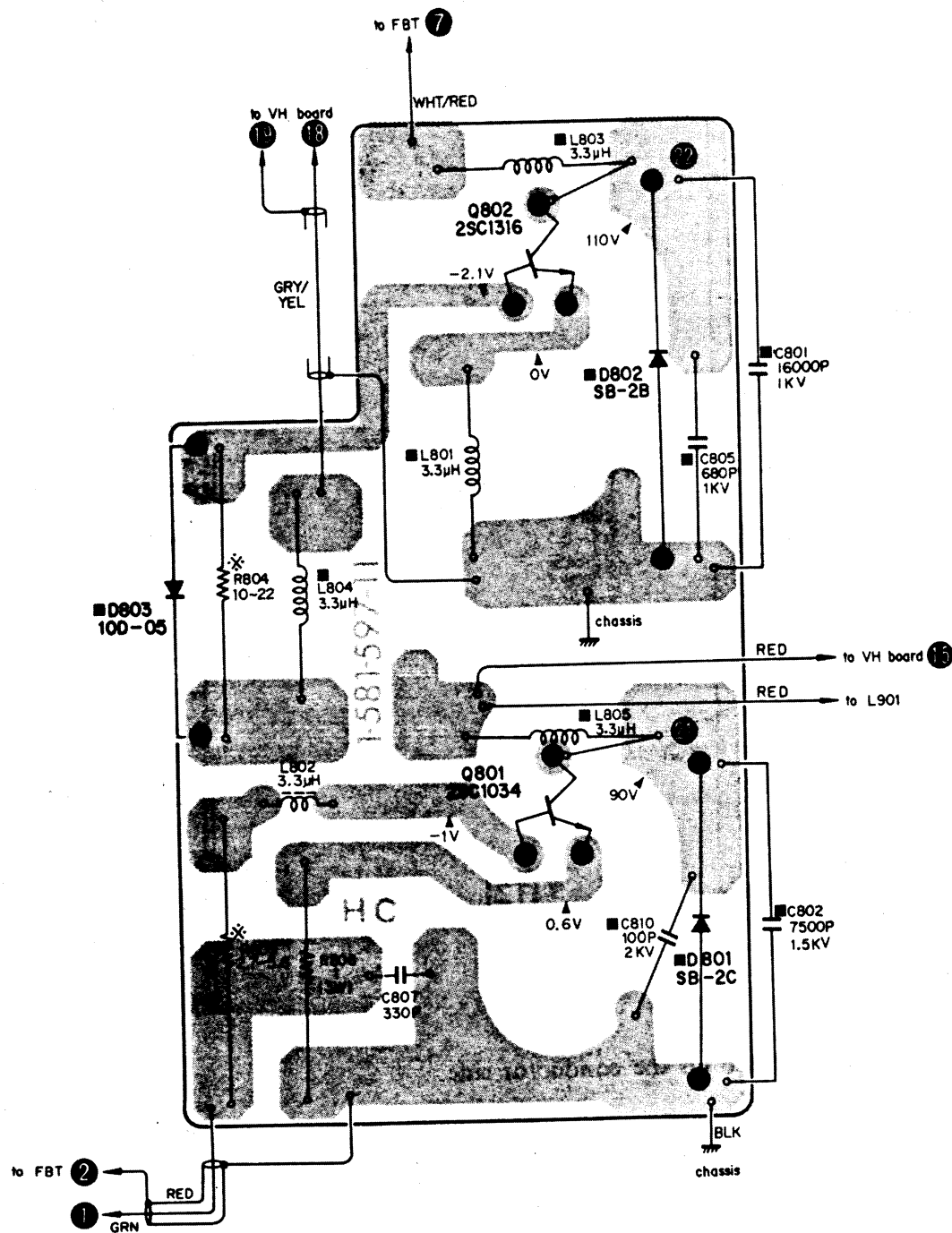
CA CIRCUIT BOARD

Chassis No. SCC-22A-A, SCC-22A-B



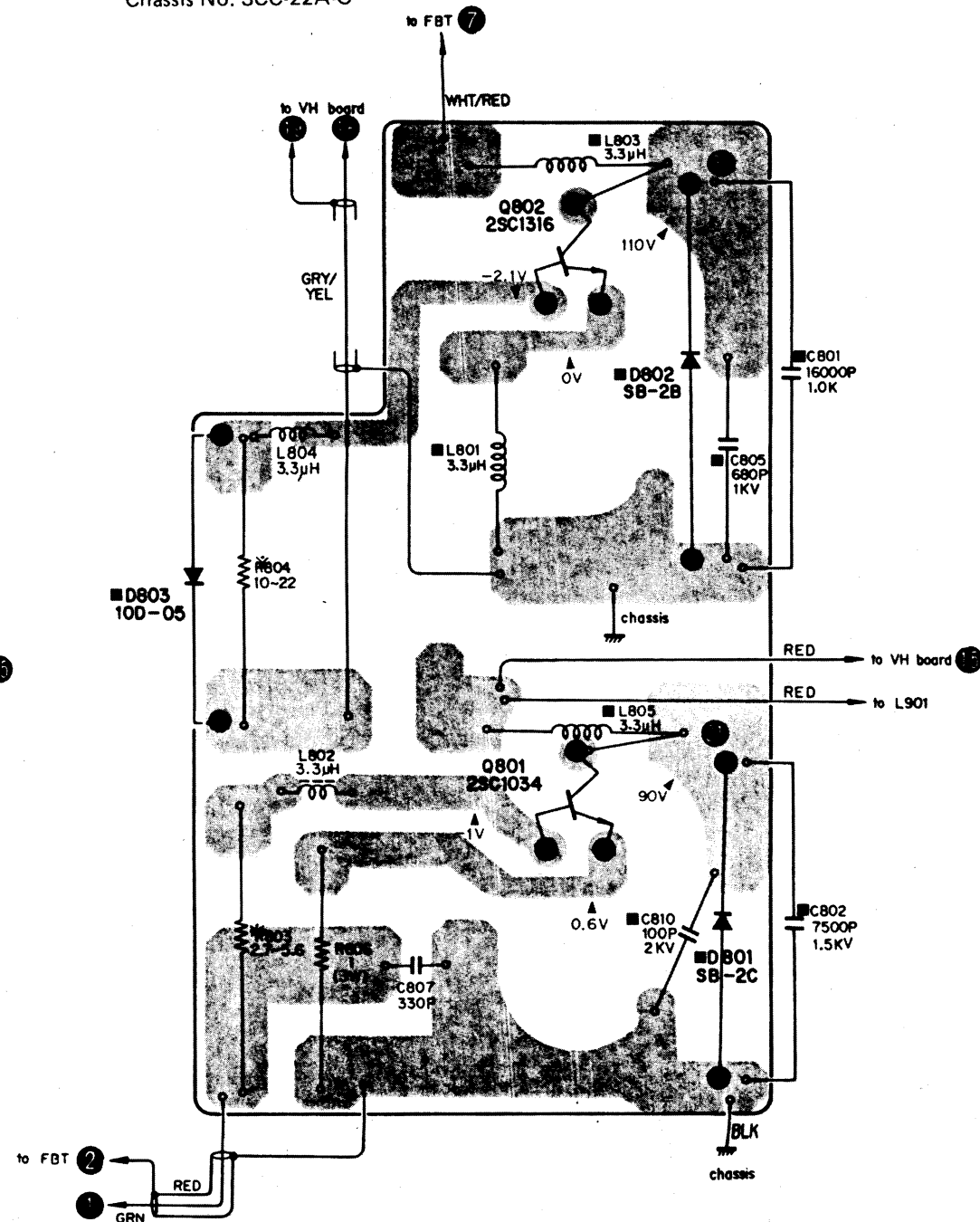
HC CIRCUIT BOARD

Chassis No. SCC-22A-A, SCC-22A-B



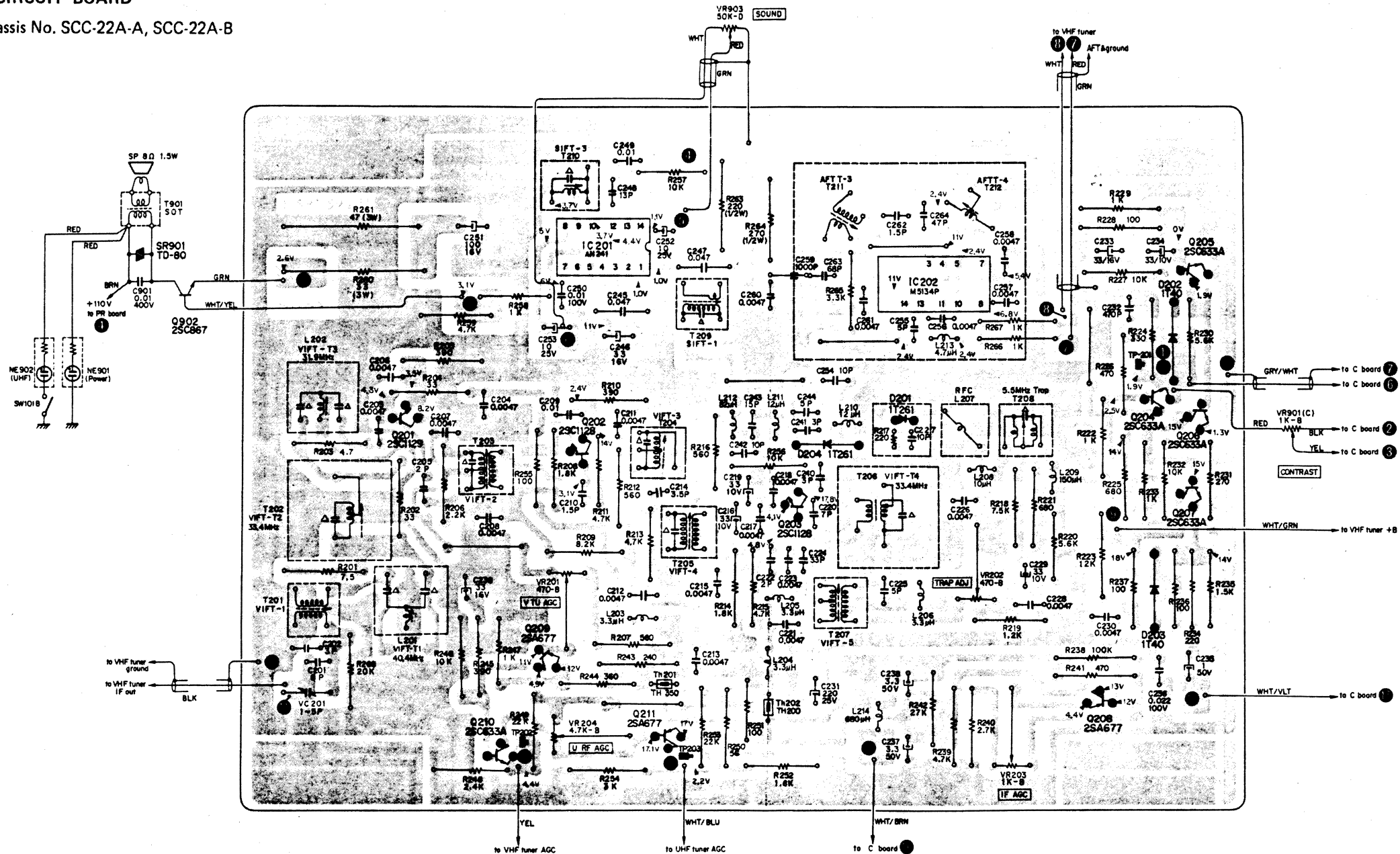
HC CIRCUIT BOARD

Chassis No. SCC-22A-C



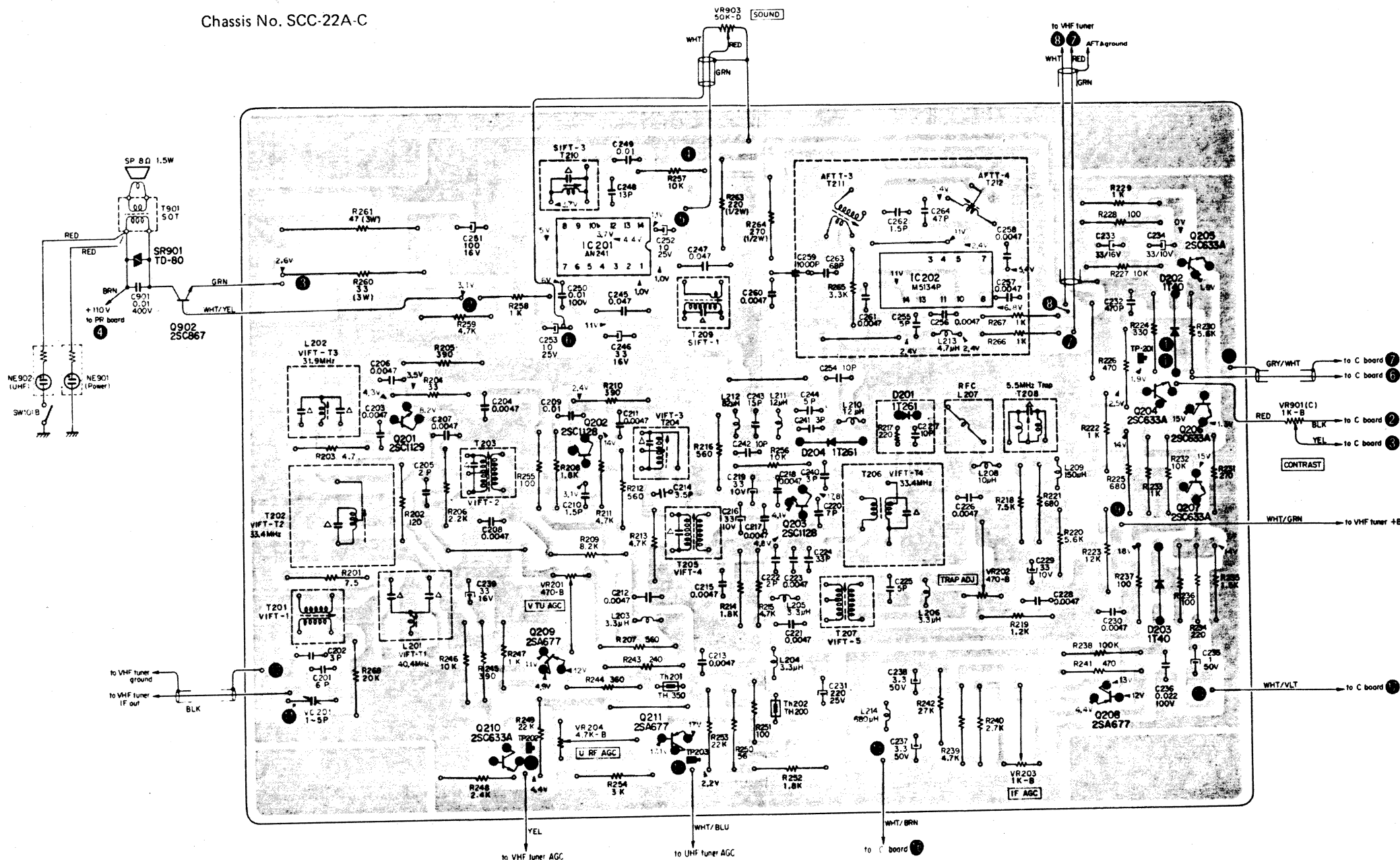
Chassis No. SCC-22A-A, SCC-22A-B

Chassis No. SCC-22A-A, SCC-22A-B



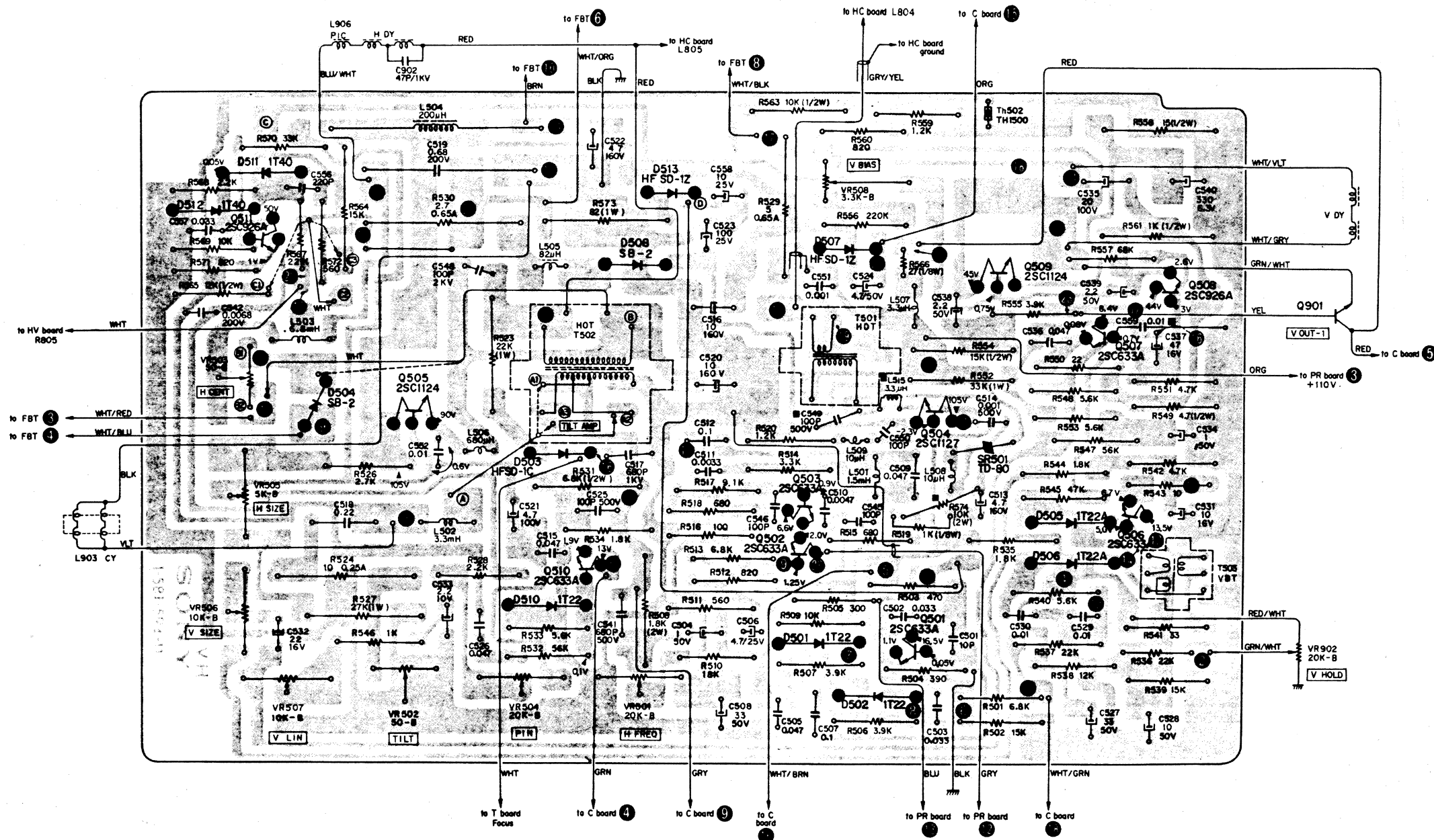
S CIRCUIT BOARD

Chassis No. SCC-22A-C



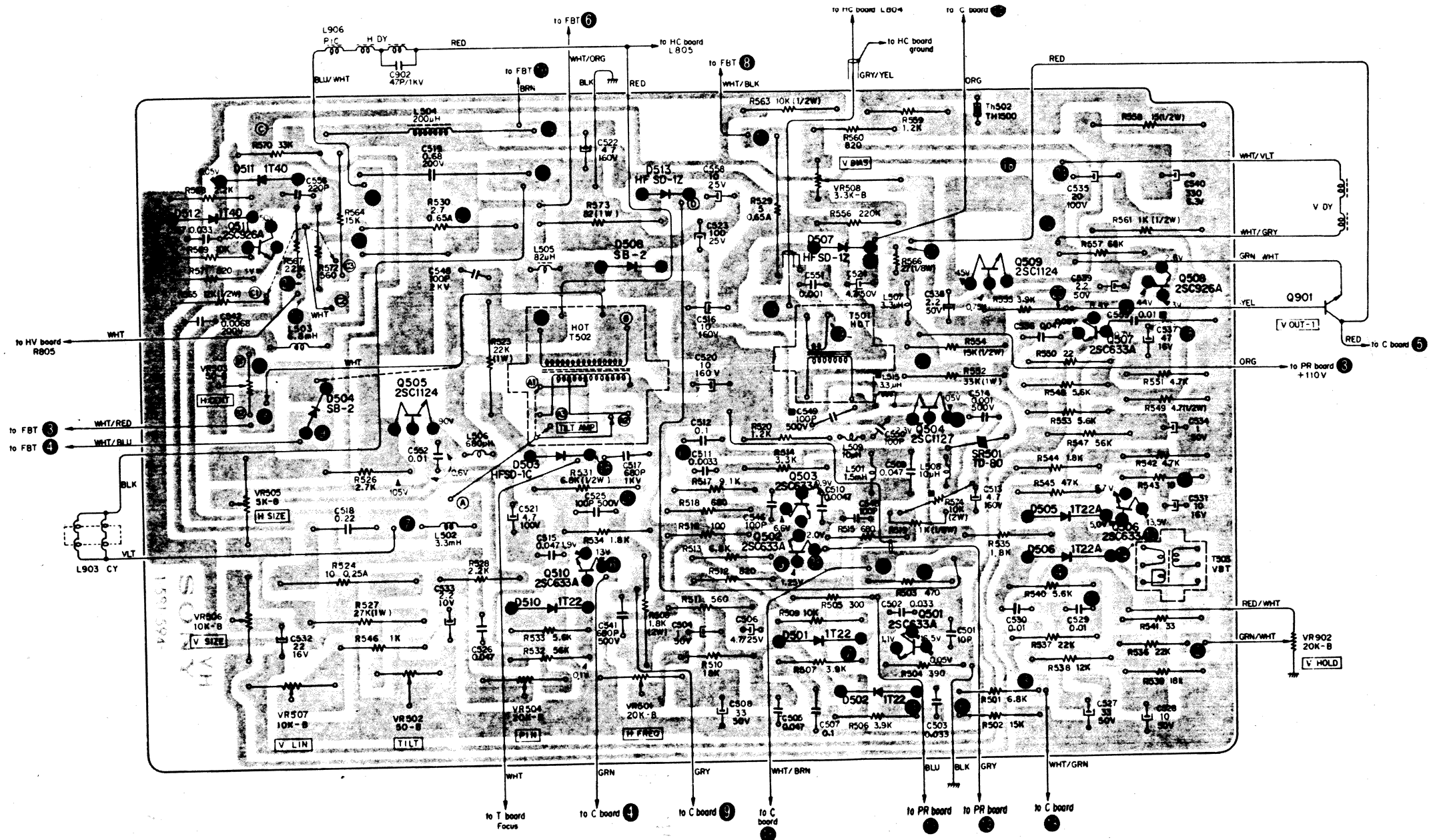
VH CIRCUIT BOARD

Chassis No. SCC-22A-A, SCC-22A-B

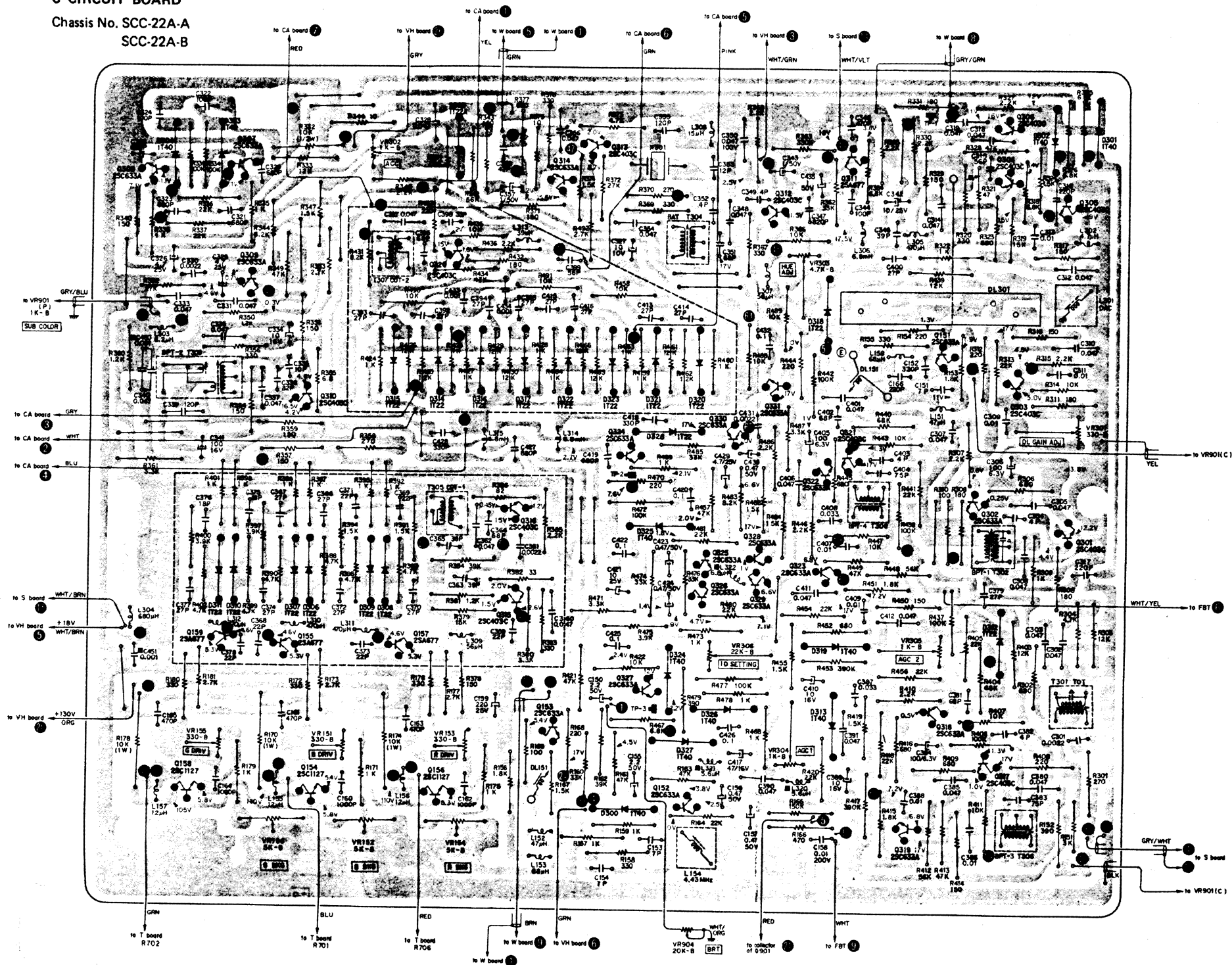


VH CIRCUIT BOARD

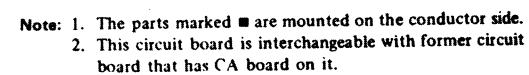
Chassis No. SCC-22A-C

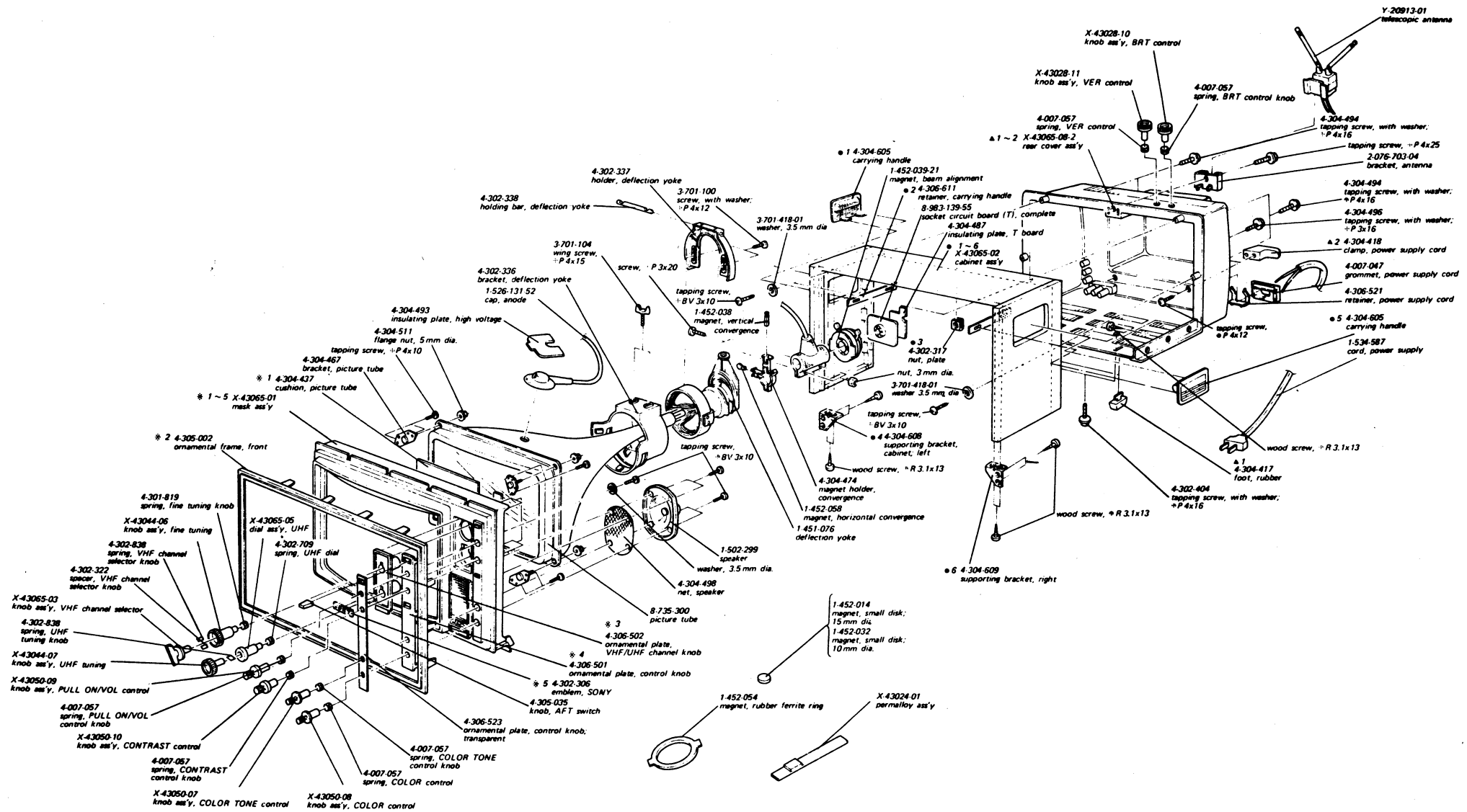


Chassis No. SCC-22A-A
SCC-22A-B



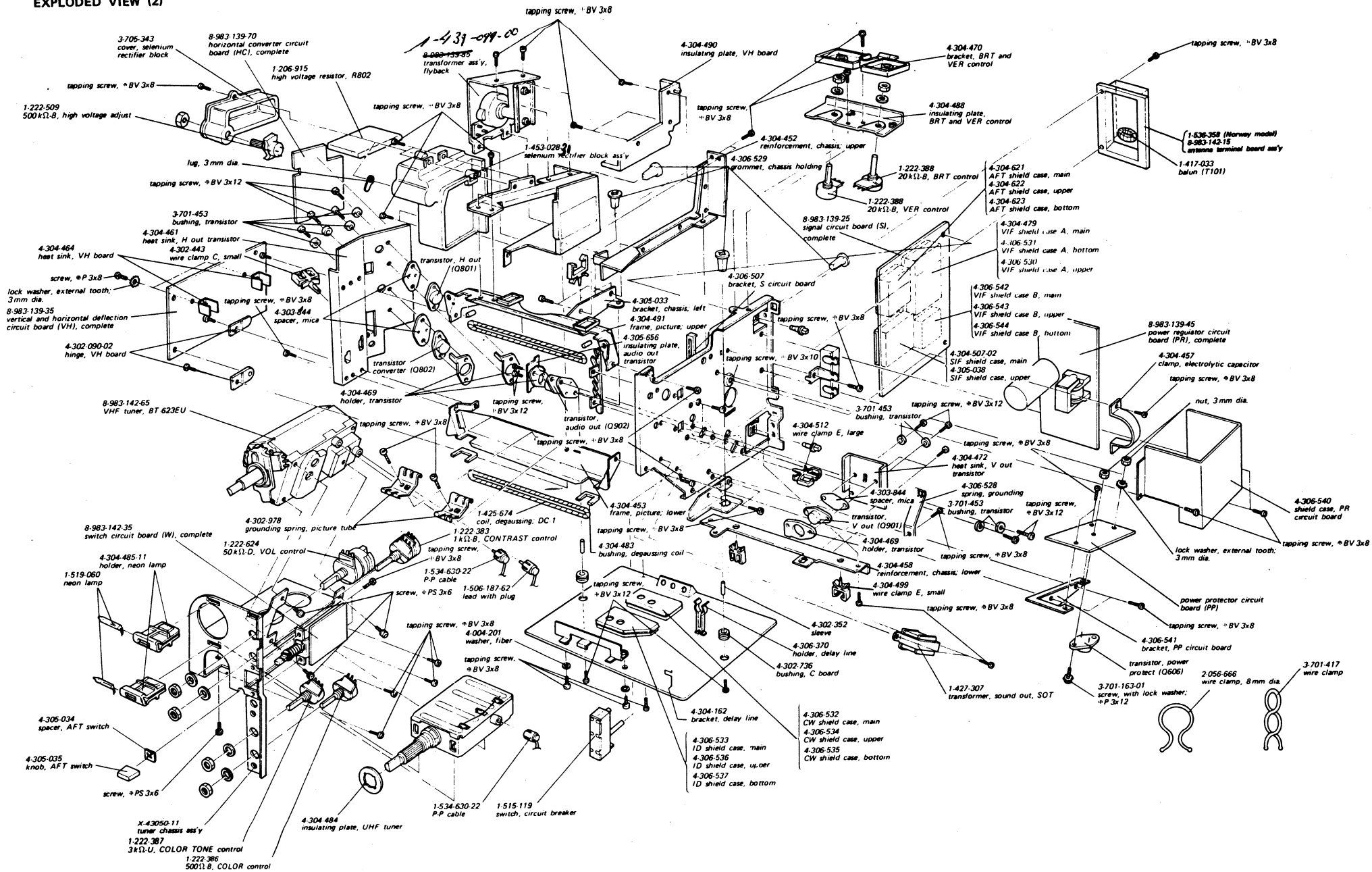
Chassis No. SCC-22A-C





Note: ● 1~5: X-43065-01 mask ass'y
▲ 1~2: X-43065-08-2 rear cover ass'y
● 1~6: X-43065-02 cabinet ass'y

EXPLODED VIEW (2)



ELECTRICAL PARTS LIST

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
TUNERS AND CIRCUIT BOARDS			⇒ Q302	8-729-663-47	2SC1364	⇒ D314-318	8-719-422-21	1T22AM	MISCELLANEOUS		
1-581-599-11	PP Board (power protector), SCC-22A-A/B		Q303-306	8-724-375-01	2SC403C	⇒ D319	8-719-815-55	1S1555	Th201	1-800-071-00	Thermistor, TH-350
1-581-599-12	PP Board (power protector), SCC-22A-C		⇒ Q307-309	8-729-663-47	2SC1364	⇒ D320-323	8-719-422-21	1T22AM	Th202	1-800-059-00	Thermistor, TH-200
8-983-139-70	HC Board (horizontal converter), complete		Q310	8-724-375-01	2SC403C	⇒ D324-327	8-719-815-55	1S1555	Th502	1-800-069-00	Thermistor, TH-15000
8-983-139-15	C Board (chroma circuit), complete		⇒ Q311	8-729-612-77	2SA1027R	⇒ D328	8-719-422-21	1T22AM	Th601	1-800-081-00	Thermistor, 8KD-7
8-983-139-25	S Board (signal circuit), complete		Q312, 313	8-724-375-01	2SC403C	⇒ D501, 502	8-719-422-21	1T22AM	SR501, 901	1-800-032-00	Varistor, TD-80
8-983-139-35	VH Board (vertical horizontal deflection), complete		⇒ Q314	8-729-663-47	2SC1364	⇒ D503	8-719-305-15	GH3F	PR901	1-800-080-00	Thermistor (positive)
8-983-139-45	PR Board (power regulator), complete		Q315-317	8-724-375-01	2SC403C	⇒ D504	8-719-305-15	GH3F	COIL		
8-983-139-55	T Board (socket circuit), complete		⇒ Q318, 319	8-729-663-47	2SC1364	⇒ D505, 506	8-719-422-21	1T22AM	All coils are microinductors unless otherwise noted.		
8-983-139-85	Transformer Ass'y, flyback (T801)		Q320, 321	8-724-375-01	2SC403C	⇒ D507	8-719-305-15	GH3F	L151, 152	1-407-165-00	47μH
8-983-142-15	Antenna Terminal Board Ass'y including		⇒ Q322-331	8-729-668-47	2SC1364	⇒ D508	8-719-305-15	GH3F	L153	1-407-167-00	68μH
1-536-358-00	(1-536-358 : Norway model)		⇒ Q501-503	8-729-663-47	2SC1364	⇒ D510	8-719-422-21	1T22AM	L154	1-409-193-00	Coil, wave trap; 4.43MHz
1-417-033-00	Balun (T101)		Q504, 505	8-725-412-00	2SC1124	⇒ D511, 512	8-719-815-55	1S1555	L155-157	1-407-158-00	12μH
1-508-492-00	Antenna Socket, UHF		⇒ Q506, 507	8-729-663-47	2SC1364	⇒ D513	8-719-305-15	GH3F	L158	1-407-167-00	68μH
1-508-493-00	Antenna Socket, VHF		⇒ Q508	8-729-255-12	2SC2551	D601	8-719-302-22	SB-2B	L201	1-409-214-00	VIFT-T1 40.4MHz
3-705-455-00	Plate, antenna terminal		Q509	8-725-412-00	2SC1124	⇒ D602	8-719-200-02	10E2	L202	1-409-215-00	VIFT-T3 31.9MHz
1-581-591-00	Antenna Board		⇒ Q510	8-729-663-47	2SC1364	⇒ D603	8-719-333-10	UF1C	L203-206	1-407-184-00	3.3μH
1-417-040-00	Transformer (T102) : Norway model		⇒ Q511	8-729-255-12	2SC2551	⇒ D604-606	8-719-200-02	10E2	L207	1-425-504-00	RF Choke
8-983-142-25	UHF Tuner, BT-123		⇒ Q601	8-729-663-47	2SC1364	⇒ D607	8-719-301-51	S-15H	L208	1-407-190-00	10μH
8-983-142-35	W Board (switch circuit), complete		Q602	8-725-412-00	2SC1124	⇒ D608	8-719-200-00	10E2	L209	1-407-171-00	150μH
8-983-142-65	VHF Tuner, BT-623EU		⇒ Q603	8-729-663-47	2SC1364	⇒ D609	8-719-930-12	EQB01-12Z	L210, 211	1-407-158-00	12μH
SEMICONDUCTORS			⇒ Q604	8-729-612-77	2SA1027R	D613	8-719-200-50	SK-1W50	L212	1-407-168-00	82μH
Transistors			⇒ Q605	8-729-255-12	2SC2551	⇒ D751-758	8-719-422-21	1T22AM (SCC-22A-A/B only)	L213	1-407-186-00	4.7μH
⇒ Q151-153	8-729-663-47	2SC1364	⇒ Q606	8-765-132-00	2SC867A	⇒ D801	8-719-305-15	GH3F	L214	1-407-557-00	680μH
⇒ Q154, 156,	8-729-322-78	2SC2278	⇒ Q751	8-724-375-01	2SC403C	⇒ D802	8-719-302-22	SB-2B	L291	1-407-166-00	56μH
⇒ Q158					(Chassis No. SCC-22A-A/B)	⇒ D803	8-719-200-02	10E2	L301	1-425-671-00	DAC
⇒ Q155, 157,	8-729-612-77	2SA1027R	Q801	8-723-424-16	2SC1034	DC801	1-453-028-21	Selenium Rectifier Block Ass'y including	L302	1-407-186-00	4.7μH
⇒ Q159			Q802	8-728-693-00	2SC1316		1-222-509-00	500kΩ-B, adjustable; VR801 (High Voltage)	L303	1-407-189-00	8.2μH
Q201	8-725-923-00	2SC1129	⇒ Q901-903	8-765-132-00	2SC867A		1-206-915-00	High Voltage Resistor, R802	L304	1-407-557-00	680μH
Q202, 203	8-725-800-00	2SC1128	Diodes			ICs			L305	1-407-177-00	470μH
⇒ Q204-207	8-729-663-47	2SC1364	D201	8-719-026-11	1T261	⇒ IC201	8-759-311-25	HA1125	L306	1-407-204-21	6.8mH
⇒ Q208, 209	8-729-612-77	2SA1027R	⇒ D201, 203	8-719-815-55	1S1555	IC202	8-759-651-34	M-5134P	L307	1-407-166-00	56μH
⇒ Q210	8-729-663-47	2SC1364	D204	8-719-026-11	1T261				L308	1-407-159-00	15μH
⇒ Q211	8-729-612-77	2SA1027R	⇒ D300	* 8-719-815-55	1S1555				L309	1-407-166-00	56μH
Q301	8-724-375-01	2SC403C	⇒ D301-304	8-719-815-55	1S1555				L310-312	1-407-177-00	470μH
			⇒ D305	8-719-422-21	1T22AM				L313	1-407-164-00	39μH
			⇒ D306-312	8-719-422-21	1T22AM				L314, 315	1-407-595-00	6.8mH
			⇒ D313	8-719-815-55	1S1555				L320, 321	1-407-186-00	5.6μH
									L322	1-407-188-00	6.8μH

Note:

⇒: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.

The mark * indicates the parts which is changed after serial No. 15,001.

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
L501	1-407-552-00	1.5mH
L502	1-459-075-00	3.3mH, dynamic convergence
L503	1-459-074-00	6.8mH, horizontal centering
L504	1-407-346-00	200μH Choke, spook
L505	1-407-553-00	82μH Choke, spook
L506	1-407-193-21	680μH
L507	1-407-364-00	3.3μH Choke
L508, 509	1-407-190-00	10μH
L515	1-407-364-00	3.3μH
L601-605	1-407-364-00	3.3μH
L606	1-407-190-00	10μH
L607	1-407-178-00	1μH
L610, 611	1-407-364-00	3.3μH
L801-805	1-407-364-00	3.3μH
L904, 905	1-425-674-00	Degauss (DC-1, 2)

L906 1-452-039-21 Beam Alignment Magnet

DL151 1-415-047-00 Delay Line
DL301 1-415-046-00 Delay Line

*L751 1-407-164-00 39μH (SCC-22A-A/B)

TRANSFORMERS

T201	1-403-728-00	VIFT-1
T202	1-409-217-00	VIFT-T2 33.4MHz
T203	1-403-729-00	VIFT-2
T204	1-403-841-00	VIFT-3
T205	1-403-729-00	VIFT-4
T206	1-409-218-00	VIFT-T4 33.4MHz
T207	1-403-730-00	VIFT-5
T208	1-409-235-00	Coil, wave trap; 5.5MHz
T209	1-403-842-00	SIFT-1
T210	1-403-843-00	SIFT-3
T211	1-403-810-00	AFT T3
T212	1-403-811-00	AFT T4
T301	1-403-844-21	TOT
T302	1-403-845-21	BPT-1
T303	1-425-506-21	BPT-2
T304	1-405-372-21	BAT
T305	1-425-618-21	COT-1

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
T306	1-403-846-21	BPT-3
T307	1-425-618-21	COT-2
T308	1-403-846-21	BPT-4
T501	1-437-030-00	HDT
T502	1-439-097-00	HOT
T503	1-435-008-00	VBT
*T601	1-421-302-21	LFT
T602	1-437-032-00	CCH

T603 1-437-033-00 CDT
T604 1-441-855-00 HIT
*T751 1-425-618-00 COT-3
T901 1-427-307-00 SOT

CAPACITORS

All capacitors are in μF and ceramic unless otherwise noted.
50WV or less are not indicated except for electrolytics.
p : μF, elect : electrolytic

C101-104	1-102-238-00	47p
C105-108	1-102-239-00	470p
C111	1-121-257-00	5 15V elect
C259	1-102-043-00	1000p 500V feed thru.
C513	1-121-246-00	4.7 160V elect
C514	1-102-038-00	0.001 500V
C517	1-102-219-00	680p 1kV
C519	1-108-549-11	0.68 200V mylar
C520	1-121-921-00	10 160V elect
C522	1-121-919-00	47 160V elect
C525	1-101-810-00	100p 500V
C541	1-102-002-00	680p 500V
C549	1-101-810-00	100p 500V
C601	1-115-101-21	0.1 450V oil
C602	1-102-240-00	0.0047 250V
C603	1-123-022-00	22 350V elect
C604	1-125-080-00	220 375V elect
C606	1-121-919-00	47 160V elect
C608	1-121-189-00	1 160V elect
C609	1-108-810-00	100p 500V
C613, 614	1-105-801-13	0.047 400V mylar
C617	1-101-810-00	100p 500V
*C621	1-129-739-00	0.1 630V film (SCC-22A-C)

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
*C622	1-129-739-00	0.1 630V film
*C623	1-108-745-21	0.22 250V mylar
C630	1-102-085-00	0.0047 500V
C701	1-119-327-00	0.47 500V elect
C702	1-102-050-00	0.01 500V
C801	1-129-864-00	16,000p 1000V film
C802	1-129-859-00	7500p 1500V film
C804	1-102-155-00	330p 2kV
C805	1-102-219-00	680p 1kV
C806	1-102-038-00	0.001 500V
C808, 809	1-102-038-00	0.001 500V
C810	1-102-153-00	100p 2kV
C901	1-105-793-00	0.01 400V mylar

RESISTORS

All resistors are in ohms. Common ¼W carbon resistors are omitted.
Refer to the list on the last page for their part numbers.
All variable and adjustable resistors have characteristic curve B,
unless otherwise noted. kΩ : 1000Ω, MΩ : 1000kΩ

R170	1-206-104-00	10k 1W metal oxide
R174	1-206-104-00	10k 1W metal oxide
R178	1-206-104-00	10k 1W metal oxide
R260	1-217-027-00	33 3W cement coated
R261	1-217-027-00	47 3W cement coated
R508	1-206-017-00	1.8k 2W metal oxide
R519	1-211-451-00	1k 1/8W carbon
R523	1-202-792-00	22k composition
R524	1-207-903-00	10 fuse
R527	1-206-109-00	27k 1W metal oxide
R529	1-207-241-00	5 fuse
R530	1-207-982-00	2.7 fuse
R549	1-207-471-00	4.7 ½W wire wound
R552	1-202-794-00	33k composition
R566	1-211-932-00	27 1/8W
R573	1-206-080-00	82 1W metal oxide
R574	1-206-688-00	10k 2W metal oxide
R601	1-207-657-00	10 3W wire wound
R603	1-207-657-00	10 3W wire wound
R604	1-206-823-00	33k 5W metal oxide

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
R608	1-206-483-00	68 2W metal oxide
R616	1-206-741-00	4.7 3W metal oxide
R618	1-206-698-00	27k 2W metal oxide
R620	1-206-700-00	33k 2W metal oxide
R622	1-211-931-00	68 1/8W carbon
R628	1-207-942-00	39 7W wire wound
R701, 702	1-202-581-00	2.2k ½W composition
R703	1-202-627-00	220k ½W composition
R704	1-202-800-00	100k ½W composition
R705	1-202-635-00	390k ½W composition
R706	1-202-581-00	2.2k ½W composition
R707	1-202-603-00	18k ½W composition
R708	1-202-808-00	470k 1W composition
*R803	1-206-918-00	2.7 3W metal film
	1-206-921-00	4.7 3W metal film
	1-206-922-00	5.6 3W metal film
	1-206-925-00	10 3W metal film
*R804	1-206-927-00	15 3W metal film
	1-206-928-00	18 3W metal film
	1-206-929-00	22 3W metal film
R805	1-202-788-00	10k composition
R806	1-217-007-00	1 3W cement coated
R901	1-205-483-00	10 10W cement coated
VR151	1-222-515-00	330, adjustable; B. DRIVE
VR152	1-222-344-00	5k, adjustable; B. BKG
VR153	1-222-515-00	330, adjustable; R. DRIVE
VR154	1-222-344-00	5k, adjustable; R. BKG
VR155	1-222-515-00	330, adjustable; G. DRIVE
VR156	1-222-344-00	5k, adjustable; G. BKG
VR201	1-222-516-00	470, adjustable; AGC
VR202	1-222-516-00	470, adjustable; TRAP
VR203	1-222-517-00	1k, adjustable; IF AGC
VR204	1-222-518-00	4.7k, adjustable; UHF RF AGC
VR301	1-222-515-00	330, adjustable; DL GAIN
VR302	1-222-517-00	1k, adjustable; ACC
VR303	1-222-518-00	4.7, adjustable; COLOR
VR304	1-222-517-00	1k, adjustable; AGC-1
VR305	1-222-517-00	1k, adjustable; AGC-2
VR306	1-222-786-00	22k, adjustable; ID SETTING

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
VR501	1-222-725-00	20k, adjustable; H. FREQ
VR502	1-223-017-00	50k, adjustable; TILT
VR503	1-223-017-00	50k, adjustable; H. CENT
VR504	1-222-725-00	20k, adjustable; PIN
VR505	1-222-344-00	5k, adjustable; H. SIZE
VR506	1-222-512-00	10k, adjustable; V. SIZE
VR507	1-222-512-00	10k, adjustable; V. LIN
VR508	1-222-784-00	3.3k, adjustable; V. BIAS
VR601	1-222-517-00	1k, adjustable; 110V
VR602	1-222-518-00	4.7k, adjustable; PP
VR701	1-222-809-00	500k, adjustable; SCRN
VR801	1-222-509-00	500k, adjustable; H. STAT
VR901	1-222-383-00	1k, variable; CONTRAST
VR902	1-222-388-00	20k, variable; VER
VR903	1-222-624-00	50k-D, variable; VOL
VR904	1-222-388-00	20k, variable; BRT
VR905	1-222-387-00	3k-U, variable; COLOR TONE
VR906	1-222-386-00	500, variable; COLOR

MISCELLANEOUS

DY	1-451-676-11	Deflection Yoke
F601	1-532-203-00	Fuse, 2A
F602	1-532-078-00	Fuse, 1A
S902	1-515-119-00	Switch, circuit breaker
SG701-705	1-519-063-00	Spark Gap 1.5kV
NE901	1-519-060-00	Neon Lamp, POWER
NE902	1-519-060-00	Neon Lamp, UHF
VC201	1-141-138-00	1 - 5pF, trimmer
X301	1-527-183-00	Crystal
	1-452-014-00	Magnet, small disk; 15mm dia.
	1-452-032-00	Magnet, small disk; 10mm dia.
	1-452-038-00	Magnet, vertical convergence
	1-452-054-00	Magnet, rubber ferrite ring
	1-452-058-00	Magnet, horizontal convergence
	1-502-299-00	Speaker
	1-506-187-62	Lead, with plug
	1-514-897-00	Switch, pushbutton; AFT
	1-526-086-00	Socket, picture tube
	1-526-130-61	Cap, anode

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
	1-526-131-52	Cap, convergence
	1-526-144-00	Cap, lead
	1-533-087-00	Holder, fuse
	1-534-587-00	Card, power supply
	1-534-630-22	Cable, p-p
	1-536-296-00	Lug, terminal
	1-536-327-00	Lug 1L1, terminal
	1-543-040-00	Core
	8-735-200-05	Picture Tube, 330AB22

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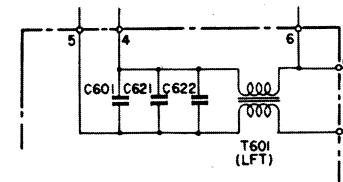
SUPPLEMENT

This supplement updates the service manual to include production changes starting with chassis number SCC-22A-A. File this supplement with the service manual.

Subject: 1. Production Change of PP circuit board
2. ANT circuit board for West Germany model
3. Change of deflection yoke
4. Cabinet for West Germany model

1-1. Netherlands, Sweden, Denmark and Finland Models

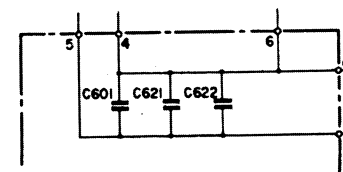
Ref. No.	~15,000	15,001~19,000	19,001~21,000	21,001~24,700	24,701 and later
T601(LFT)	○	—	○	○	—
C601	0.1 μF/450V	0.1 μF/450V	0.1 μF/450V	0.22 μF/250V	0.22 μF/250V
C621	—	0.1 μF/630V	—	—	—
C622	—	0.1 μF/630V	0.1 μF/630V	—	0.1 μF/630V



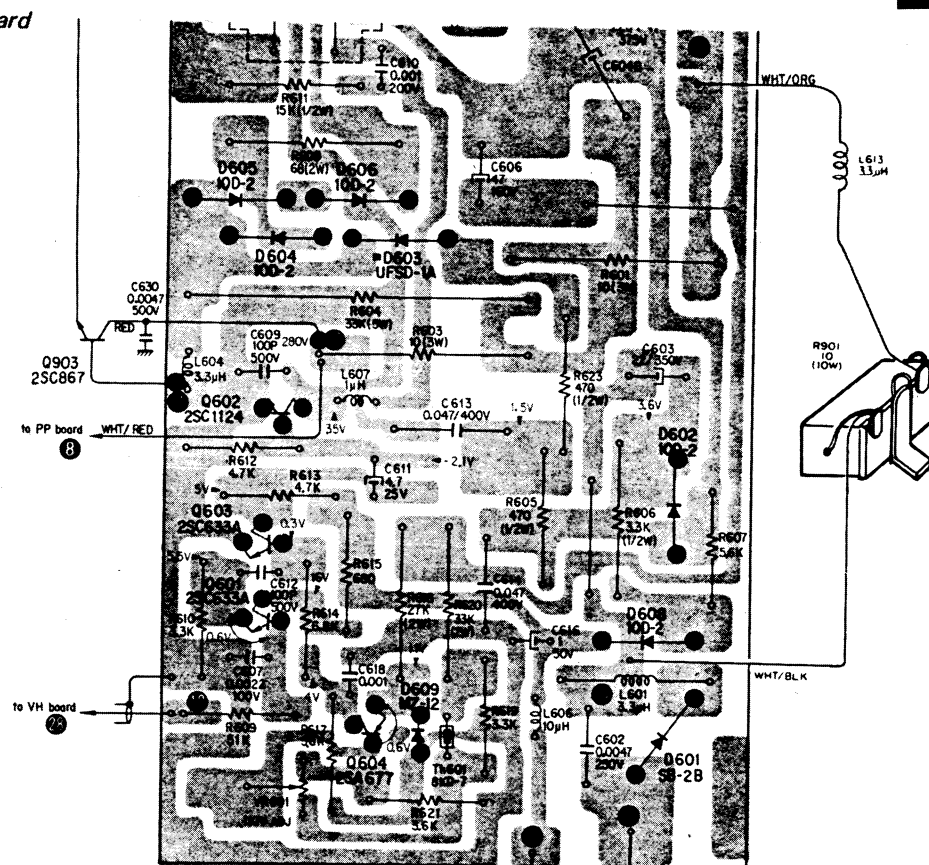
1. The mark \bigcirc in this list indicates that the component is used and the mark — not used.
2. After serial number 24,701, two micro inductors are added. See diagrams on page 2 and 3.

1-2. Switzerland Model

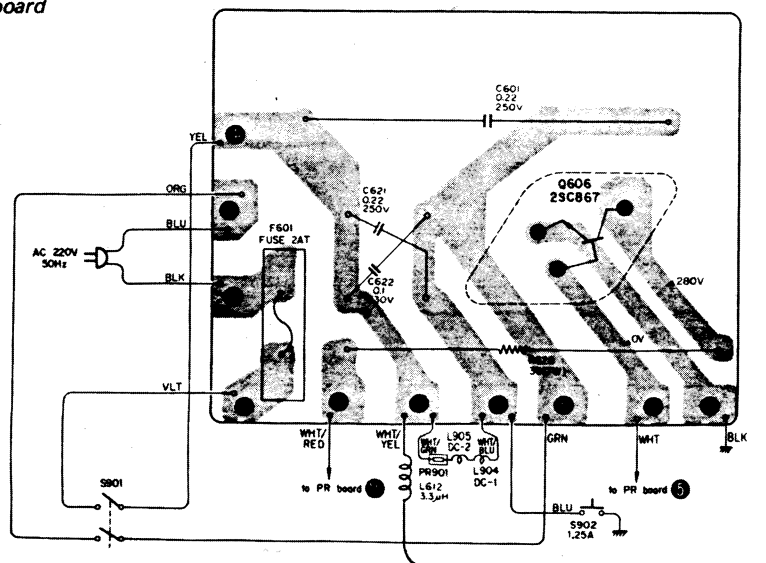
Ref. No.	15,001~19,000	19,001~21,000	21,001~24,700	24,701 and later
T601(LFT)	-----		-----	-----
C601	0.1μF/450V		0.22μF/250V	0.22μF/250V
C621	0.1μF/630V			
C622	0.1μF/630V		0.1μF/630V	0.1μF/630V



1. There is no Switzerland model between serial number 19,001 and 21,000.
2. The mark — in this list indicates that the component is not used.
3. After serial number 24,701, two micro inductors are added. See diagrams on page 2 and 3.



PP board

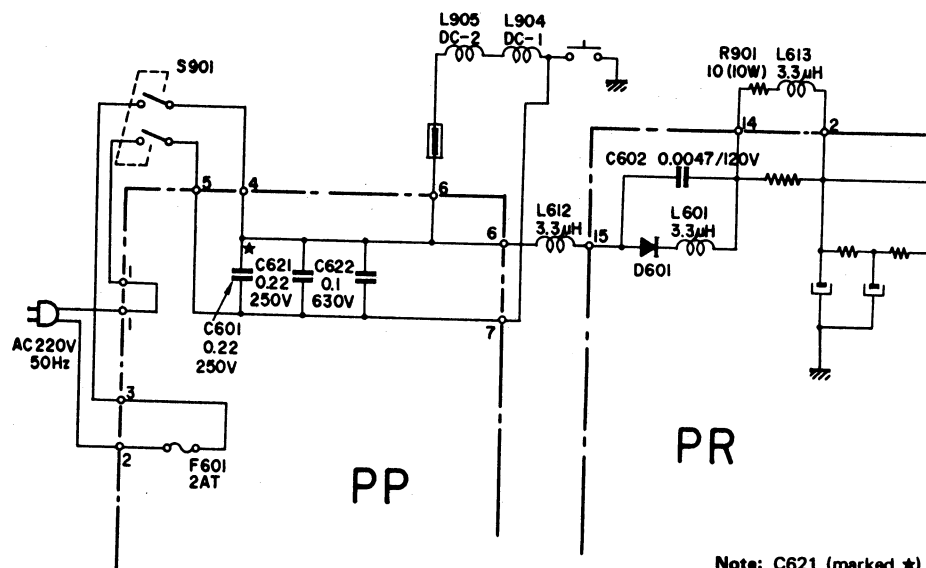


West Germany Model

The set for West Germany has serial number 24,701 and later.
See diagrams.

Partial Schematic Diagram

— Serial No. 24,701 and later —

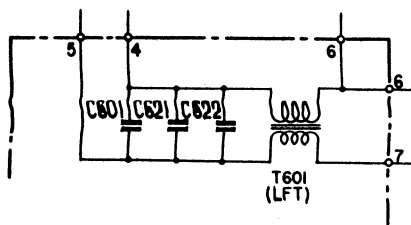


Note: C621 (marked ★) is Norway model only.

C601	1-108-745-21	0.22 ±20%	250WV	mylar
★ C621	1-108-745-21	0.22 ±20%	250WV	mylar
C622	1-129-739-00	0.1 ±10%	630WV	film
L612	1-407-364-21	3.3μH,		micro inductor
L613	1-407-364-21	3.3μH,		micro inductor

Norway

Ref. No.	15,001~19,000	19,001~21,000	21,001~24,700	24,701 and later
T601(LFT)	○		○	—
C601	0.22μF/250V		0.22μF/250V	0.22μF/250V
C621	0.1μF/630V		—	0.22μF/250V
C622	0.22μF/250V		0.22μF/250V	0.1μF/630V



Note:

- There is no Norway model between serial number 19,001 and 21,000.
- The mark ○ in this list indicates that the component is used and the mark — not used.
- After serial number 24,701, two micro inductors are added. See diagrams on page 2 and 3.

Note: C621 is Norway model only.

ANT CIRCUIT BOARD FOR WEST GERMANY MODEL

ANT circuit board for West Germany model is the same with Norway model. T102 is added on the circuit board. See page 32 of *Service Manual KV-1300E* (Chassis No. SCC-22A-C, Serial No. 15,001 and later).

Parts	West Germany, Norway	Other Countries
ANT circuit board, complete	1-536-358-00	8-983-142-15
T102	1-417-040-00	omitted

CHANGE OF DEFLECTION YOKE

Deflection yoke is changed after serial number 19,001. Former deflection yoke can be replaced by the new type.

Former	New
1-451-076-11	1-451-091-00

CABINET FOR WEST GERMANY MODEL

In West Germany model, a new cabinet is used.

Parts	West Germany	Other Countries
Cabinet Ass'y	X-43065-10-0	X-43065-02-0
Rear Cover Ass'y	X-43065-09-0	X-43065-08-2

SUPPLEMENT

No. 3
March, 1973

Subject: Electrical and Mechanical Changes

This supplement updates the service manual to include production changes on circuit and mechanical parts.
File this supplement with the service manual.

1. CHANGED PARTS LIST

Ref. No.	Former Part Value	New Part No./ Part Value	Applicable Serial No./ Associated Circuit Board
C559	0.01 μ F/50V	-----	19,001 ~ , VH board
C570	-----	1-105-741-12 0.001 μ F \pm 10% 200V mylar	
*R370	270 ohm	-----	19,001 ~ , C board
R384	39k ohm	1-244-709-11 33k ohm	
R527	-----	1-244-701-11 15k ohm	23,501 ~ 62,100, VH board
°R527	27k ohm	1-206-111-11 39k ohm 1W metal oxide	62,101 ~ , VH board
°R575	15k ohm	-----	
R903	-----	1-244-643-11 56 ohm	39,001 ~ , speaker circuit

Ref. No.	Former Part Value	New Part No./ Part Value	Applicable Serial No./ Associated Circuit Board
IC202	M5134P	CX-089D	58,941 ~ , S board
D602	10D-2	10D-4	19,001 ~ , PR board
SR901	TD80	-----	39,000 ~ , Speaker circuit
L210	12 μ H	1-407-187-00 5.6 μ H	58,941 ~ , S board
L509	10 μ H	-----	47,701 ~ , VH board
*L308	15 μ H	1-407-189-00 8.2 μ H	19,001 ~ , C board
C233 C239 C246	33 μ F/16V	1-121-402-11 33 μ F \pm 18% 10V electrolytic	unknown S board
C252	10 μ F/25V	1-121-391-11 1 μ F \pm 18% 50V electrolytic	19,001 ~ , S board
*C352	4pF	1-102-942-11 5pF \pm 0.5pF 50V ceramic	19,001 ~ , C board
*C353	12pF	1-102-959-11 22pF \pm 5% 50V ceramic	
*C355	120pF	1-101-455-11 1000pF \pm 20% 50V ceramic	
C430	0.47 μ F/50V electrolytic	1-106-753-12 0.01 μ F \pm 10% 200V mylar	40,501 ~ , C board
*C452	-----	1-101-880-11 47pF \pm 5% 50V ceramic	19,001 ~ , C board

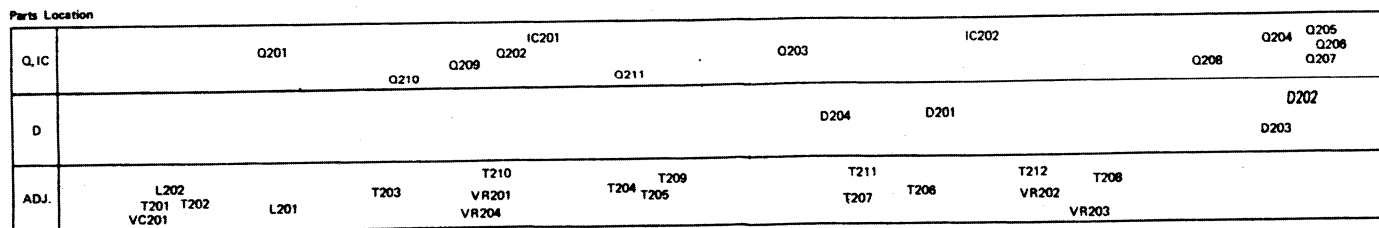
Note: All resistance values are in 5% $\frac{1}{4}$ W carbon type unless otherwise indicated.
The parts marked * or ° should be replaced altogether should replacement of any one of them be required.

Serial No. 19,001~
Chassis No. SCC-22A-A
SCC-22A-B
SCC-22A-C



Parts Location		
Q. IC	D	ADJ.
Q306	D301 D302	
Q313 Q311	D305 D304 D303	VR302
Q308 Q307		
Q314 Q304 Q305 Q312	D322 D323	T304
Q320		T307 VR30
Q309	D318	L3
Q151	D314 D315 D316 D317 D318 D321 D320	T303
Q303 Q331		
Q310	D328	VR3
Q330		
Q324 Q321 Q322		
Q302 Q316		T30
Q301	D325	T305
Q328 Q325 Q323 Q329 Q328 Q315	D311 D310 D307 D306 D309 D308	T30
Q158 Q155 Q157	D312 D319	VR30 VR30
Q327	D324	
Q318	D326	T3
Q153	D313 D327	VR155 VR151 VR153 VR30
Q317		
Q158 Q154 Q156 Q152 Q319		VR156 VR152 VR154 T3 L154

Serial No. 19,001~
Chassis No. SCC-22A-A
SCC-22A-B
SCC-22A-C



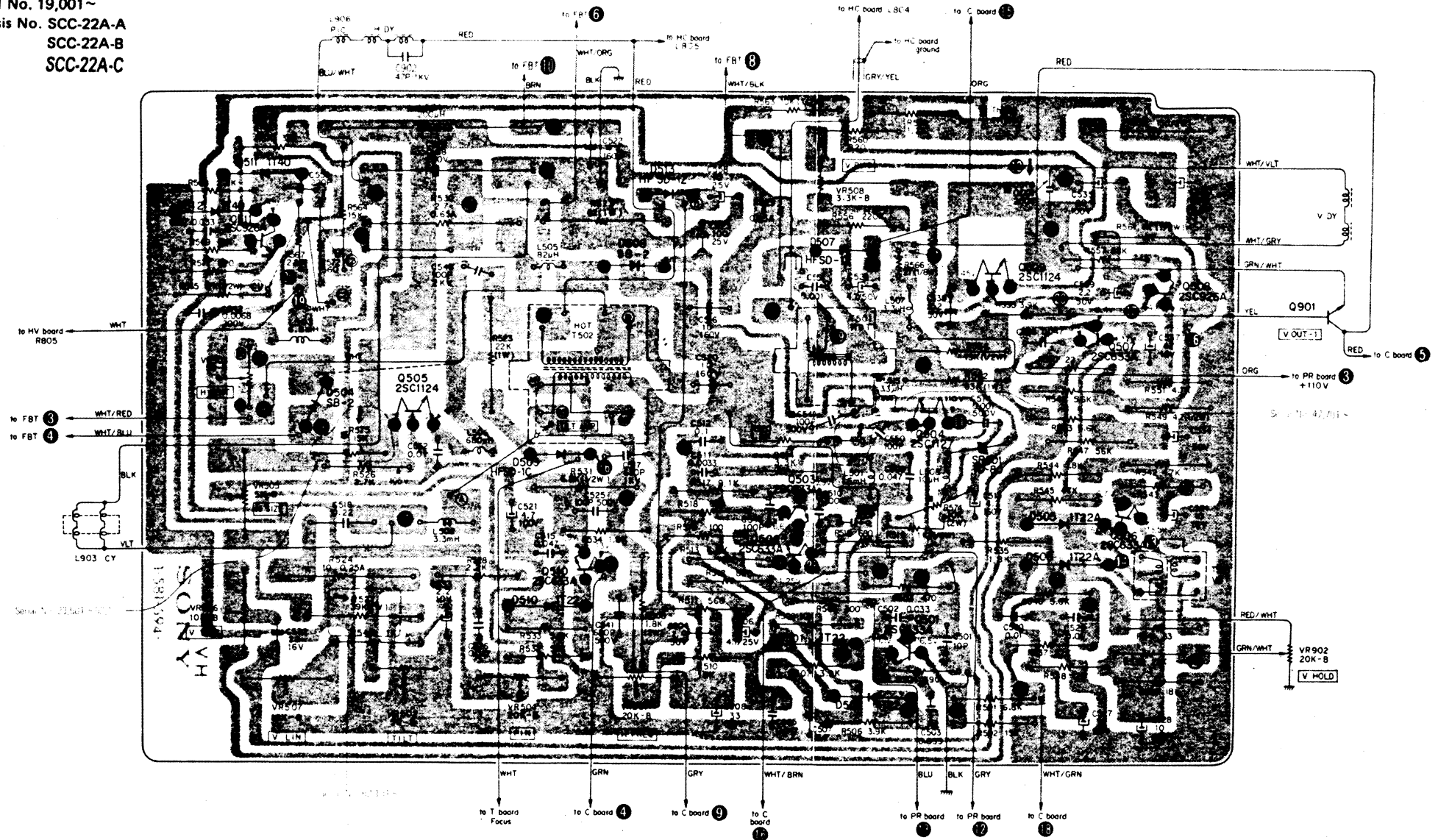
MOUNTING DIAGRAM - VH Board -

Serial No. 19,001~

Chassis No. SCC-22A-A

SCC-22A-B

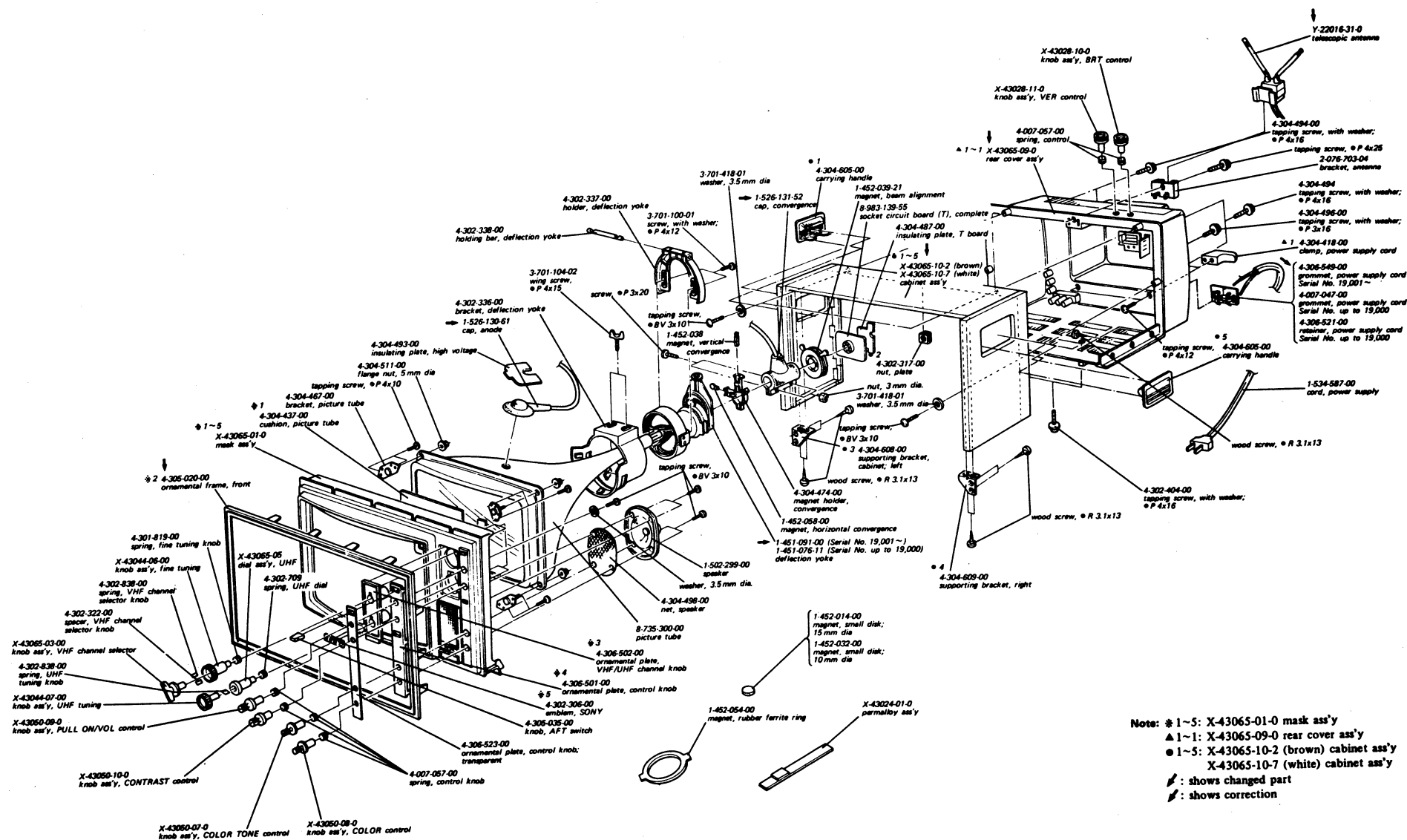
SCC-22A-C



Parts Location

Q	Q511	Q505	Q510	Q503 Q502	Q504	Q509	Q507 Q506	Q508			
D	D512	D511	D504	D503	D508	D513	D507	D501	D502	D505	D506
ADJ	VR503 VR505 VR506	VR507	VR502	VR504	VR501	VR508					

EXPLODED VIEWS (1)



SUPPLEMENT

No. 4
April 1973

Subject: Electrical and Mechanical Changes

This supplement updates the service manual to include production changes covering **Serial No. 69,249 ~ 71,249**.
File this supplement with the service manual.

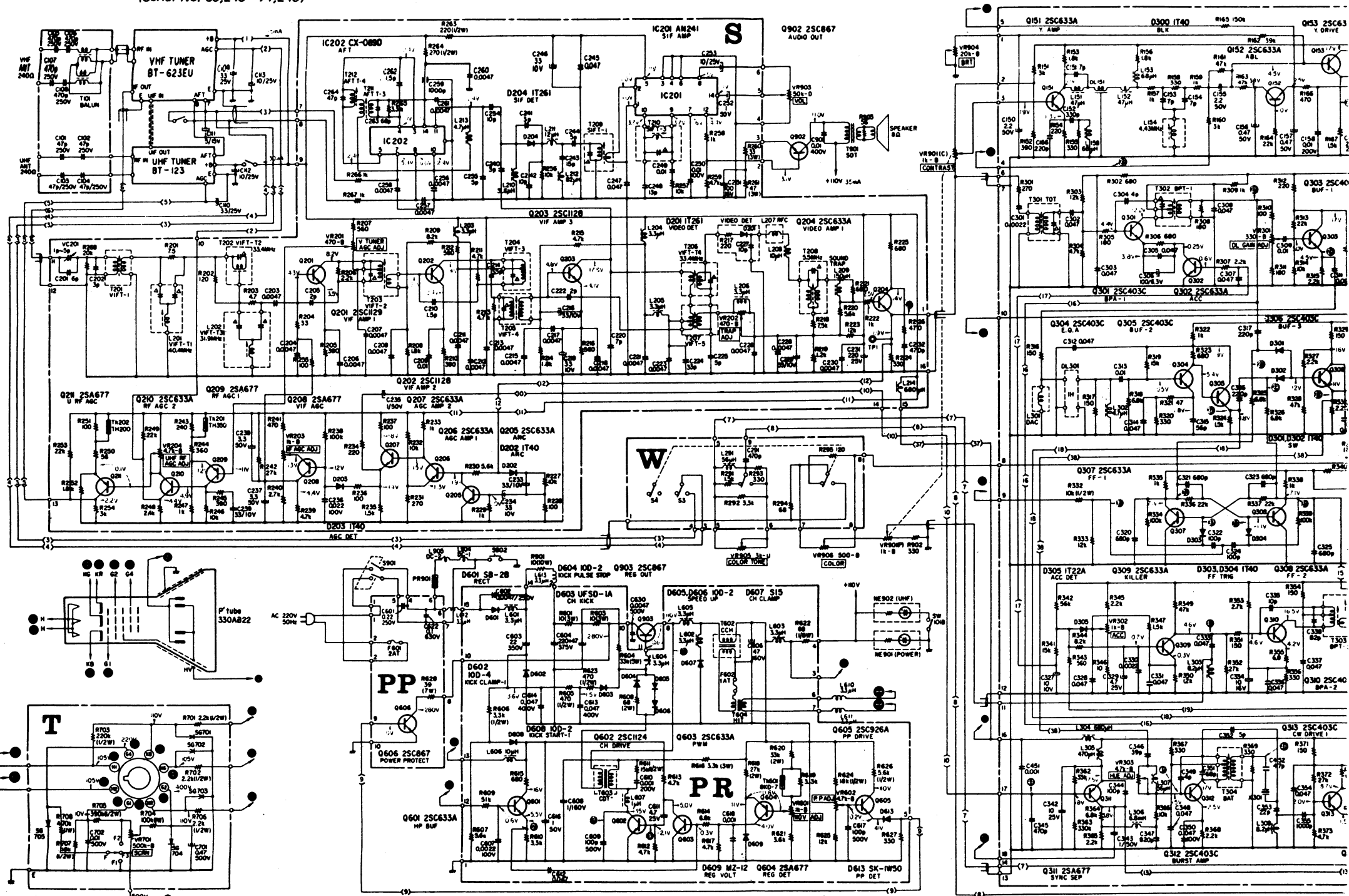
1. INTRODUCTION

The VH circuit board and deflection yoke have been changed in addition to some other electrical and mechanical changes.

2. CHANGED PARTS LIST

(Serial No. 69,249 ~ 71,249)

<i>Ref. No.</i>	<i>Former Part Value</i>	<i>New Part No./Part Value</i>
VH board	8-983-139-35	8-983-781-15
Q904	-----	2SC867
L907	-----	1-451-096-00 coil, phase adjustment; PAC
T902	-----	1-421-301-00 transformer, pincushion; PCT
C921	-----	1-108-632-11 0.33 μ F \pm 10% 100 V mylar
R921	-----	1-244-673-11 1 k Ω \pm 5% $\frac{1}{4}$ W carbon
R922	-----	1-244-673-11 1 k Ω \pm 5% $\frac{1}{4}$ W carbon
R923	-----	1-244-703-11 18 k Ω \pm 5% $\frac{1}{4}$ W carbon
DY	1-451-076-11	1-451-096-00 deflection yoke



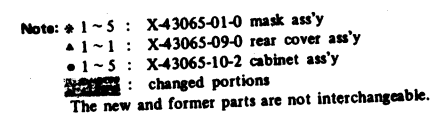
(Serial No. 69,249~71,249)



Q	Q505	Q510	Q503 Q502	Q504 Q501	Q507 Q506	Q508	Q901 Q904
D	D512	D511	D504	D503 D510	D508	D513	D507 D501 D502
ADJ.	VR503 VR505 VR506	VR507	VR504	VR501	VR502	VR902	

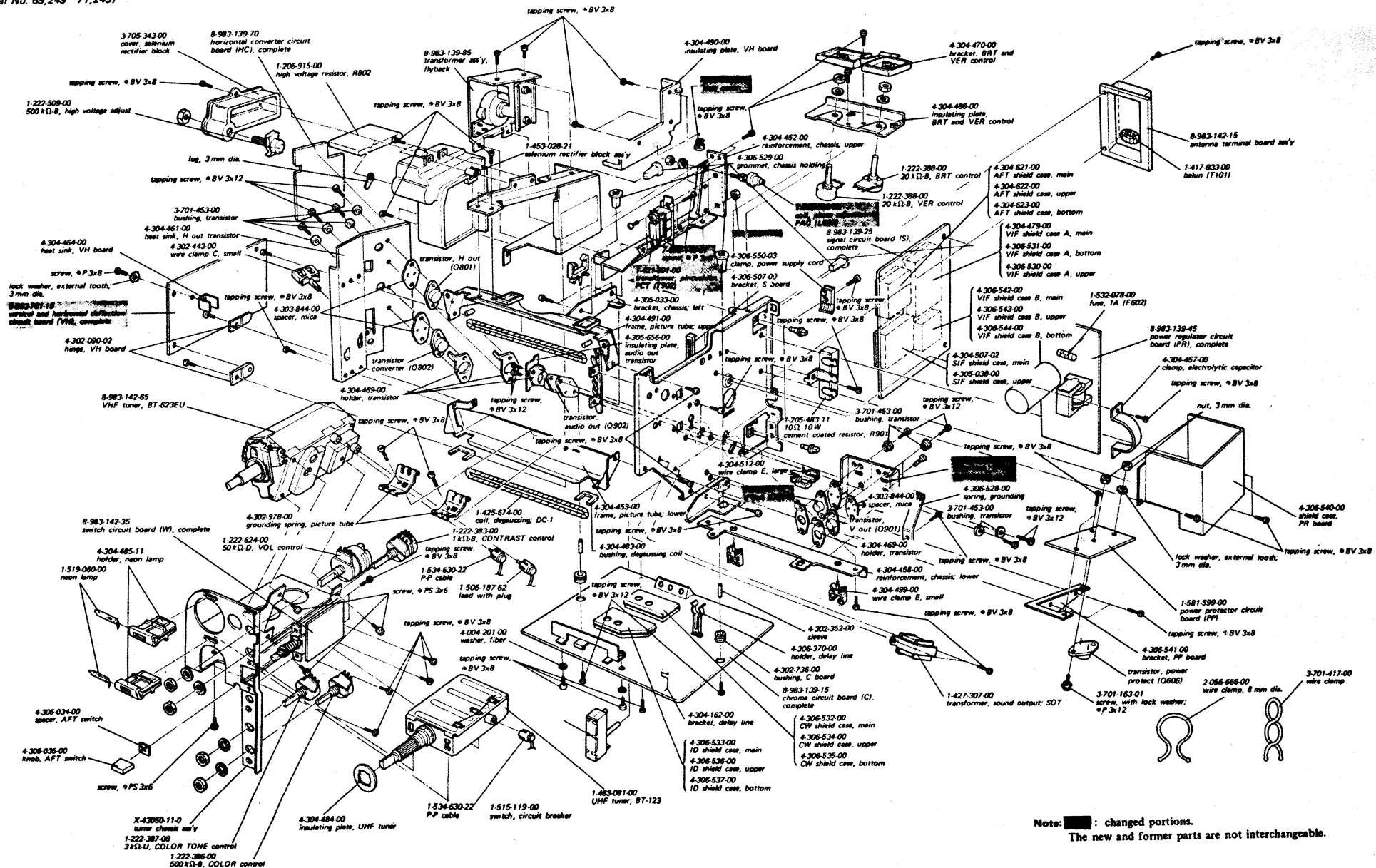
Note: 1. The parts marked ■ are mounted on the conductor side.
2. / shows the changed portion.

(Serial No. 69,249 ~ 71,249)



EXPLODED VIEW (2)

(Serial No. 69,249 ~ 71,249)



Note: ■ : changed portions.
The new and former parts are not interchangeable.

NEW VH BOARD PARTS LIST

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description	Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
SEMICONDUCTORS			CAPACITORS			RESISTORS					
Q501	transistor	2SC633A	All the capacitors are in μF , 50V and ceramic unless otherwise noted. $p = \mu\text{F}$.			All the resistors are in ohms, $\pm 5\%$, $\frac{1}{4}\text{W}$ and carbon unless otherwise noted. $k = 1,000$ ohms.					
Q502	transistor	2SC633A	C501	1-102-947-11	10p $\pm 5\%$	R501	1-244-693-11	6.8k	R533	1-244-691-11	5.6k
Q503	transistor	2SC633A	C502	1-108-632-11	0.033 $\pm 10\%$ 100V mylar	R502	1-244-701-11	15k	R534	1-244-679-11	1.8k
Q504	transistor	2SC1127	C503	1-108-632-11	0.033 $\pm 10\%$ 100V mylar	R503	1-244-665-11	470	R535	1-244-679-11	1.8k
Q505	transistor	2SC1124	C504	1-121-391-11	1 $\pm 10\%$ 50V electrolytic	R504	1-244-663-11	390	R536	1-244-705-11	22k
Q506	transistor	2SC633A	C505	1-108-634-11	0.047 $\pm 10\%$ 100V mylar	R505	1-244-660-11	300	R537	1-244-705-11	22k
Q507	transistor	2SC633A	C506	1-121-395-11	4.7 $\pm 10\%$ 25V electrolytic	R506	1-244-687-11	3.9k	R538	1-244-699-11	12k
Q508	transistor	2SC1124	C507	1-108-638-11	0.1 $\pm 10\%$ 100V mylar	R507	1-244-687-11	3.9k	R539	1-244-703-11	18k
Q509	-----	-----	C508	1-121-405-11	33 $\pm 10\%$ 50V electrolytic	R508	1-206-017-11	1.8k	R540	1-244-691-11	5.6k
Q510	transistor	2SC633A	C509	1-106-212-12	0.047 $\pm 5\%$ 100V mylar	R509	1-244-697-11	10k	R541	1-244-637-11	33
Q511	transistor	2SC926A	C510	1-106-188-12	0.0047 $\pm 5\%$ 100V mylar	R510	1-244-703-11	18k	R542	1-244-689-11	4.7k
D501	diode	1T22	C511	1-106-184-12	0.0033 $\pm 5\%$ 100V mylar	R511	1-244-667-11	560	R543	1-244-625-11	10
D502	diode	1T22	C512	1-108-638-11	0.1 $\pm 10\%$ 100V mylar	R512	1-244-671-11	820	R544	1-244-679-11	1.8k
D503	diode	HFSD-1C	C513	1-121-246-11	4.7 $\pm 10\%$ 160V electrolytic	R513	1-244-693-11	6.8k	R545	1-244-713-11	47k
D504	diode	SB-2	C514	1-102-038-11	0.001 $\pm 10\%$ 500V	R514	1-244-685-11	3.3k	R546	1-244-673-11	1k
D505	diode	1T22A	C515	1-105-729-13	0.22 $\pm 10\%$ 100V mylar	R515	1-244-669-11	680	R547	1-244-715-11	56k
D506	diode	1T22A	C516	1-121-708-11	10 $\pm 10\%$ 160V electrolytic	R516	1-244-649-11	100	R548	1-244-691-11	5.6k
D507	diode	HFSD-1Z	C517	1-102-219-11	680p $\pm 20\%$ 1kV	R517	1-244-696-11	9.1k	R549	1-207-471-11	4.7 $\frac{1}{4}\text{W}$ wirewound
D508	diode	SB-2	C518	1-106-212-12	0.047 $\pm 5\%$ 100V mylar	R518	1-244-669-11	680	R550	1-244-633-11	22
D509	-----	-----	C519	1-108-549-11	0.68 $\pm 10\%$ 200V mylar	R519	1-211-451-11	1k $\frac{1}{4}\text{W}$	R551	1-244-689-11	4.7k
D510	diode	1T22	C520	1-121-921-11	10 $\pm 10\%$ 160V electrolytic	R520	1-244-675-11	1.2k	R552	1-202-794-11	33k 1W composition
D511	diode	1T40	C521	1-121-918-11	4.7 $\pm 10\%$ 100V electrolytic	R521	-----	-----	R553	1-244-691-11	5.6k
D512	diode	1T40	C522	1-121-919-11	47 $\pm 10\%$ 160V electrolytic	R522	-----	-----	R554	1-244-899-11	12k $\frac{1}{4}\text{W}$
D513	diode	HFSD-1Z	C523	1-121-416-11	100 $\pm 10\%$ 25V electrolytic	R523	1-202-792-11	22k 1W composition	R555	1-244-673-11	1k
SR501	1-800-032-00	varistor	C524	1-121-396-11	4.7 $\pm 10\%$ 50V electrolytic	R524	1-206-145-11	68 3W metal oxide	R556	1-244-717-11	68k
			C525	1-101-810-11	100p $\pm 5\%$ 500V	R525	-----	-----	R557	1-244-719-11	82k
			C526	1-108-634-11	0.047 $\pm 10\%$ 100V mylar	R526	1-244-683-11	2.7k	R558	-----	-----
			C527	1-121-405-11	33 $\pm 10\%$ 50V electrolytic	R527	1-206-110-11	33 1W metal oxide	R559	-----	-----
			C528	1-121-738-11	10 $\pm 10\%$ 50V electrolytic	R528	1-244-681-11	2.2k	R560	1-244-657-11	220
			C529	1-108-626-11	0.01 $\pm 10\%$ 100V mylar	R529	1-207-241-11	5 0.65 A fuse	R561	1-244-873-11	1k $\frac{1}{4}\text{W}$
			C530	1-108-626-11	0.01 $\pm 10\%$ 100V mylar	R530	1-207-982-11	2.7 0.65 A fuse	R562	-----	-----
			C531	1-131-158-11	10 $\pm 20\%$ 16V electrolytic	R531	1-244-893-11	6.8k $\frac{1}{4}\text{W}$	R563	1-244-675-11	1.2k
			C532	1-121-479-11	22 $\pm 10\%$ 16V electrolytic	R532	1-244-715-11	56k	R564	1-244-899-11	12k $\frac{1}{4}\text{W}$
			C533	1-127-024-11	2.2 $\pm 20\%$ 10V electrolytic (alox)				R565	1-244-897-11	10k $\frac{1}{4}\text{W}$
			C534	1-121-391-11	1 $\pm 10\%$ 50V electrolytic				R566	1-211-932-11	27 $\frac{1}{4}\text{W}$
			C535	1-121-917-11	20 $\pm 20\%$ 100V electrolytic				R567	1-244-705-11	22k
			C536	1-101-006-11	0.047 $\pm 10\%$				R568	1-244-681-11	2.2k
			C537	1-121-409-11	47 $\pm 10\%$ 16V electrolytic				R569	1-244-697-11	10k
			C538	1-121-450-11	2.2 $\pm 10\%$ 50V electrolytic				R570	1-244-709-11	33k
			C539	1-131-158-11	10 $\pm 20\%$ 16V tantalum				R571	1-244-671-11	820
			C540	1-121-751-11	330 $\pm 10\%$ 6.3V electrolytic				R572	1-244-667-11	560
			C541	1-102-002-11	680p $\pm 10\%$ 500V				R573	1-206-080-11	82 1W metal oxide
			C542	1-105-751-12	0.0068 $\pm 10\%$ 200V mylar				R574	1-206-688-11	10k 2W metal oxide
			C543	-----	-----				R575	1-244-675-11	1.2k
			C544	-----	-----				R598	1-244-641-11	47
T501	1-437-030-00	transformer, horizontal drive; HDT	C545	1-102-973-11	100p $\pm 5\%$				R599	1-244-709-11	33k $\frac{1}{4}\text{W}$
T502	1-439-134-00	transformer, horizontal output; HOT	C546	1-102-973-11	100p $\pm 5\%$				VR501	1-222-725-00	20k-B, adjustable (H FREQ control)
T503	1-435-008-00	transformer, vertical blocking; VBT	C547	-----	-----				VR502	1-223-019-00	300-B, adjustable (TILT control)